

INDEX*

With the exception of Allee *et al.* (1949) and Sverdrup *et al.* (1942 or 1946), indexed as such, junior authors are indexed to the page on which the senior author is cited although their names may appear only in the list of references to the chapter concerned; all authors in the annotated bibliographies are indexed directly. Certain variants and equivalents in specific and generic names are indicated without reference to their standing in nomenclature. Ship and expedition names are in small capitals. Attention is called to these subindexes: Intertidal ecology, p. 540; geographical summary of bottom communities, pp. 520-521; marine borers (systematic groups and substances attacked), pp. 1033-1034.

Inasmuch as final assembly and collation of the index was done without assistance, errors of omission and commission are those of the editor, for which he prays forgiveness.

- Abbott, D. P., 1197
 Abbs, Cooper, 988
 Abe, N., 1016, 1089, 1120, 1149
 Abel, O., 10, 281, 942, 946, 960, 967, 980, 1016
 Aberystwyth, algae, 1043
Abestopluma pennatula, 654
Abra (= *Syndosmya*)
 alba community, 789
 ovata, 846
Abramis, 867, 868
 brama, 795, 904, 905
 Abundance (Abundanz), 474
 of vertebrate remains, 968
 Abyssal (defined), 21
 animals (fig.), 662
 clay, 645
 community, 652-654
 fauna, distribution, 664
 fishes, distribution (fig.), 667
 species, age of, 668
Abyssocucumis ingolfi, 1193
 Abyssopelagic zone, 643
Acanella eburnea, 1105
Acantharia, 1069
Acantharia, 450
Acanthaster, 622
Acanthobdella peledina, 423
Acanthobdellida, 423
Acanthocephala, 422, 1118
Acanthodoris pilosa, 350
Acanthorus, 665, 667
 distribution (fig.), 667
Acanthozostera, 618
 gemmata, 928, 929
 Acarina, 424
Acartia, 1168
Acartia bifilosa, 781, 792, 793
 clausi, 833, 834, 856, 1166
 longiremis, 792, 1167
 tonsa, 716, 787
 Acclimatization, 143, 166-168
 in Caspian Sea, 904, 906-912
Acentropus niveus, 779
Acera bullata, 494, 495, 497
Acerina cernua, 987
Acetabularia, 261, 262, 263
 Acid digestion in Holothurians, 280
- Acipenser*, 421
 güldenstädtii, 905
 ruthenus, 394, 904
 stellatus, 905
Acmaea, 1150
 limatula, 551, 700, 1148
 mitra, 551
 persona, 419
 scabra, 700
 Acnidiosporidia, 418
 Acoela, 420
Acrhella horrescens, 1096
Acrochordus granulatus, 1215
 javanicus, 1215
Acropora, 437, 615, 618, 622, 627, 1096
 acuminata, 619, 622; facing 621
 arbuscula, 624
 brueggemanni, 618, 627, 1090
 cuneata, 615
 conigera, 620
 corymbosa 431, 618, 620, 622, 627
 association, 623
 zone, 620; facing 621, 626
 digitifera, 618, 620
 zone, 618; facing 620
 echinata, 622, 624
 exilis, 622
 formosa, 624
 zone, 623, 624; facing 627
 hebes, 620, 627; facing 626
 humilis, 618, 620, 622, 623
 humilis-digitifera, 619
 implicata, 624
 nasuta, 622
 nobilis, 624
 palifera, 618, 619, 622, 623
 zone, 618
 rambleri, 624
 rayneri, 615, 624
 reticulata, 623, 624
 association, 623
 zone, facing 621
 reticulata-hyacinthus-cytherea, 619
 rosaria, 622
 rotumana, 618, 620
 squamosa, 618, 627
 striata, 622

* The index is a joint contribution of University of California, Scripps Institution of Oceanography, and Pacific Marine Station, College of the Pacific.

- Acropora*—(cont'd)
surculosa, 618, 620
teres, 624
Acleon candens, 716
Actinactis doryphorus, 424
Actinia equina, 400, 437, 501
Actinians, commensal, 399
 life span, 501
Actinicola percula, 622
Actinocyclus, 901, 914
 ehrenbergi, 914
Actinodendron, 623
Actinomyxidia, 419
Actinothoe pugna, 400
Acrothoracida, 426
Adacna minima, 914
 plicata, 804, 806
Adam, W., 1139
Adams, C. C., 1
Adamsia, 399
 palliata, 402
 sociabilis, 402
Aden, Gulf, coral reefs, 1095
 oxygen, 224
Adeney, W. E., 190
Adolph, E. F., 148, 1211
Adriatic mortality, 978
 oyster pests, 1130
 temp. and salinity, 1130
Aedes argenteus, 1182
 dorsalis, 1179
 mariae, 148, 1180
 sollicitans, 1179
 taeniorhynchus, 1179
Aega ventrosa, 1151
Aegean Sea, 2
Aegidae, 426
Aeolidiella, (*Eolidina*) *alderi*, 432
Aeolis glauca, 432
Aeoliscus strigatus, 622
Aepophilus, 1178
 bonairei, 1178
Aepus, 1178
Aetolikon mortality, 986
Affinity groups, 470
Afgnak mortality, 974
Agar-digesting bacteria, 1039
Agassiz, A., 10, 257, 280, 650, 654, 1090, 1191
Agassiz, Louis, 5, 946, 980, 987
Agassiz trawl, 75
Ageciras, 728
Aggregata eberthi, 418
Aglaophenia(?) *galathea*, 656
Agnatha, 1203
Ago Bay, Foraminifera, 1078
 mortality, 981
Agulhas Bank, 946, 963
 Current, 327, 949, 951
Ahermatypic corals, 1089
Ahlmann, H. W., 88
Ahlstrom, E. H., 376, 1205
Ahrens, L. H., 245
Ahrens, L. W., 355
Aikawa, H., 957, 958
Aiptasia, 436
Aiptasiomorpha luciae, 704
Air, bacteria, 1039
Aiyar, R. Gopala, 928, 986, 1120
Aix-en-Provence shales, 966
Akashiwo mortality, 981
Akers, W. H., 1076
Akşiray, F., 865
Alaria, 552
 esculenta, 1048
Åland Sea, 753
Alaska, Gulf of, oxygen, 230
 mortality, 976
Albacore, 1209
ALBATROSS, 112, 223, 224
ALBATROSS III, 199
Albatrosses, 1219, 1220, 1221
Alberni Inlet, 689
Albert I, Prince of Monaco, 654
Albunea, 1154
Alburnus tarichi, 977
Alcidae, 1219
Alciopa, 1121
 cantrainii, 1121
Alcippe lampas, 426
Alcock, A. A., 394
Alcyonacea, 1106
 zooxanthellae in, 433
Alcyonaria, 1105
 calcite in, 264
Alcyonidium polyonum, 787
Alcyonium, 433, 620
Alderia modesta, 781
Alebius glaber, 425
Aleem, A. A., 550, 573, 724, 1047, 1051, 1059
Aleev, Y. G., 866
Alepus, 426
Aletes, 637
Aleutian Islands, 333
 Ridge, 230
Aleutian copepods, 1165
Alexander, James E., 983
Alexander, W. B., 677, 678, 701, 702, 703, 1219
Alexeterion parviti, 654
Algae, 1041
 calcareous, 261-263
 in estuaries, 707, 1024
 osmotic pressure, 140
Algal borers, 279, 1030
 cushions, 846
 mats, 280
 ridge, 615; facing 620
Algerian coast, fauna, 1017
Al-Hussaini, A. H., 1206
Alikunhi, K. H., 1120
Alinat, J., 55
Alkalinity, Black Sea, 821
 deep sea, 647
Alkmara romijni, 780
Allan, J. R. H., 67
Allan, Joyce, 1135
Allan, P. F., 1052
Allan, R. S., 1113
Allantactis parasitica, 403
Allee, W. C., 5, 19, 20, 148, 177, 370, 463, 465, 537, 550, 611,
 728, 1012, 1013, 1188
Allee *et al.*, 1, 36, 43, 146, 149, 160, 161, 166, 415, 471, 1012
Allee's principle, 47
Allen, Esther C., 1040
Allen, E. J., 730
Allen, F. E., 698, 1027

- Allen, J. A., 497, 517, 1143
 Allen, J. Frances, 1143
 Allen, N. T., 54, 73
 Allen, W. E., 9, 298, 447, 449, 535, 956, 970, 981, 1061, 1062
Alligator mississippiensis, 1213
 Allocoela, 420
Allogromia laticollaris, 1076
Alloposus mollis, 988
Aloyidis gibba, 1149
 Alpheids, freshwater, 1157
Alpheopsis haugi, 1157
monodi, 1157
Alveolinella quoyi, 1077
Alveopora, 619
 Alyar, R. G., 449
Amansia glomerata, 1049
Amaroucium, 418
constellatum, 1199
pellucidum, 1198, 1199
 Amazon tides, 681
Ambassis natalensis, 394
Amblyrhynchus cristatus, 1213, 1214
 Ambroz, A. P., 866, 867
 Amemiya, L., 1029, 1129
Amia, 1206
calva, 421
 Amison, J. M., 956
 Ammocoete, 1204
Ammodytes, 646, 846
Ammophila arenaria, 1057
baltica, 1057
 -*Lathyrus maritimus*, 1052
 Ammonia, Baltic, 320
 Black Sea, 822
 Gulf of Maine, 313, 314
 and nitrogen, Pacific, 308
Ammotrypane galathea, 657
 Amoebina, 418
Ampelisca, 495, 1153
 community, 516
 Amphibians, 1211
 Amphibiotic, zone, 546
Amphidesma, 595
subtriangulatum, 597
ventricosum, 594, 597
Amphidinium fusiforme, 982
Amphilepis norvegica-*Pecten vitreus* community, 518
Amphilina foliacea, 421
 Amphilinidea, 421
Amphiodia-*Amphioplus* communities, 513
cratoderma-Turritella fenestrata community, 513
occidentale community, 513
 sp.-*Schizaster* sp. community, 514
Amphiophiura bullata, 653, 654
convexa, 654
Amphioplus macraspis community, 514
Amphioxus, 848, 849
 sands, 846
 Amphipod communities, 516
 Amphipoda, 426, 1153
 Skagerak, 1154
 Isle of Man, 1155
 Amphineura, 424
Amphiprion, 403, 427
bicinctus, 622
 and *Stoichactis* (fig.), 403
Amphiroa, 261, 624
anceps, 1017
Amphiscolops langerhansii, 437
Amphisile heinrichi, 942
Amphistegina, 276
Amphitrite robusta, 407
rubra, 494
Amphiura, 472, 477, 487, 488, 495, 847
aestuarii community, 512
chiajei, 845, 1188
Amphiura communities, 485, 510; (fig.), 512, 513
filiformis, 488
 -*Amphiura chiajei* community, 511
florifera community, 512
rosea community, 512
Anabaena, 792
baltica, 782, 786, 792
Anacropera, 624
 Anaerobic glycolysis, 281
 Anaerobic respiration in molluscs, 267
 Anal papillae, 150
Anarrhichas, 979
Anaspides, 696
 Anastrophe, 941
 Anatolia, fish fauna, 862
 Anchialo Lagoon, 853
Anchoa hepsetus, 709
mitchelli, 709
 Ancient deposits, 734
Ancylus fluviatilis, 769
 Ancylus Lake, 769, 771
 Anderson, C., 1139
 Anderson, C. T., 250
 Anderson, D. Q., 194, 306, 1040
 Anderson, E. C., 243
 Anderson, W. W., 151
 Andersson, Charles W., 983
 Andersson, K. A., 1219
 André, M., 424, 1031, 1175
 Andrée, K., 681, 729, 960
 Andreitcheva-Vankova, M., 818
 Andrewartha, H. G., 33, 41, 42, 47, 1012
 Andrews, E. A., 150, 395, 1143
 Andrews, Harry L., 1041
 Andriashev, A. P., 363, 1206
 Andros Island, 628
 Andrusov, N. I., (or Andrussov, Nicolaus), 802, 803, 804,
 824, 969, 977
Anelasma squalicola, 425
 Anemones, 1108
 and fishes, 403
Anemonia sargassensis, 368
sulcata, 437
 Angas, G. F., 1139
 Angelescu, V., 35, 691, 692
 Angelier, E., 596, 1175
 Anglers, 643
 Anglesey, intertidal, 1018, 1019
 Angstrom, A., 110
Anguilla, 144
vulgaris, 795
Angulus exiguus, 846
 Animals in Baltic (fig.), 773
 Animal production, (defined), 500
Anisakis, 422
Anisus (Planorbis) vortex, 779
 Ankel, W. E., 393, 1149

- Annandale, N., 11, 146, 501, 693, 1029, 1084, 1090, 1172, 1211
- Annelida, 423
carbonate deposition by, 264
Japan, 1121
- Annenkova, N., 1121
- Annual cycle of nutrients, 311
- Annual rhythm, 918, 921
- Anodonta cygnea*, 267
piscinalis, 779
- Anolis agassizii*, 1215
carolinensis, 1213
- Anomalocardia cuneimeris*, 716
- Anopheles albimanus*, 1177, 1180
atroparvus, 1179
atropos, 1179
curcians bradleyi, 1179
elutus, 1179
labranchiae, 1179
maculipennis, 1179
- Anophrys elongata*, 419
- Anopla, 422
- Anraku, Masateru, 1165
- Ansisstrosyllis constricta*, 657
- Antarctic Bottom Water, 217
Convergence, 216, 324, 325
Intermediate Water, 197, 217, 225
Ocean, algae, 1048
circulation, 325
nutrients, 310, 324-330
oxygen content, 216
Radiolaria, 1072
- Antedon*, 1183
- Antennal glands, 138
Gammarus (fig.), 138
- Antholoba*, 399
achates, 400
- Anthony, R., 397
- Anthopleura elegantissima*, 550
xanthogrammica, 351, 636
- Anthoplexaura dimorpha*, 392
- Anthozoa, 420, 1108
- Anthuridea, 426
- Antias hirsutus*, 374
unirameus, 374
- Antigone spissa*, 595
- Antipa, G., 11, 729, 819, 865, 959, 983
- Antipaltes*, 426
- Antitropicality, 378
- Antonio-Murgoci, A., 865
- Anuraea aculeata*, 856
cochlearis, 856
- Anurida*, 849
marilima, 1178, 1179, 1180
- Anurosporidium pelseneeri*, 419
- Apex size, *Natica* (fig.), 179
- Aphanis dispar*, 712
fasciatus, 712
- Aphanisomenon*, 792, 855, 856, 901
flos aquae, 792, 1049
- Aphelocheirus*, 1177
- Aphrodite aculeata*, 494, 495
- Aphotic zone, 23, 120
- Aplacophora, 424
- Aplodinotus grunniens*, 420
- Aplysia*, 624
punctata, 497
- Apoda, 1193
- Apodida, 426
- Apogonichthys*, 1206
strombi, 404
- Aporidea, 422
- Aporrhais*, 472
pespelecani, 495, 805
- Apostomea, 419
- Applegate, V. C., 1203
- Appelöf, A., 19, 20, 168, 169
- Apstein, C., 768, 1121, 1162
- Apulyont, Lake, 862
- Aqualung, 55
- Arabian Sea, algae, 1043
mortality, 977, 985
- Arachnida, 424
- Arachnoidea placenta* community, 520
- Araeolaimoidea, 422
- Aragonite, 239, 250, 264
in algae, 261
Bahama Bank, 256
-calcite relations, 272
ecological aspects, 269-273
in foraminifera, 263
isotope ratios, 257
needles, 257
precipitation of, 256
solubility, 252, 265
- Aral Sea, 131, 913-915
benthos, 915
Biota, 915
composition, 914
- Arbacia*, 1192
- Arbuthudt, C. R., 980
- Arca*, 280, 595, 623, 803
glacialis, 466
glacialis-Astarte crenata community, 518
- Arcata mortality, 987
- Arcella*, 176
- Archaeolithothamnion*, 615
- Archangelski, (see Arkhangel'sky),
- Archer, J. G., 559, 561
- Archiannelida, 423, 1126
- Archibathyal, 21
- Archibenthal, 21
- Archiv für Molluskenkunde, 1143
- Arctic algae, 1042
bacteria, 1036
communities (fig.), 519
complex in Caspian, 895
copepods, 1165
immigrants in Caspian, 900
polychaetes, 1121
species at depth, 466
tidal zones, 461
- Arctic Mediterranean, oxygen, 221-222
- Arcionæ fragilis*, 405
hosts of (table), 406
- Arctophila fulva*, 783
distribution, 785
- Arenicola*, 688, 722, 847, 1122
assimilis, 1122
claparedii, 1125, 1126
cristata, 1125, 1126
lovensi, 1122
marina, 472, 494, 498, 978, 1122, 1123, 1125, 1127
- Argobuccinum oregonense*, 1114
- Argonauta*, egg case, 267

- Arguloidea, 425
Argulus, 425
 funduli, 425
 megalops, 425
Argyroleucus, 653
Argyrotheca, 1114
 cordata, 1114
Aricia armiger, 978
 foetida, 494
Arita, Keizo, 1175
Arkell, W. J., 47
Arkhangel'sky, A. D., (or Archangelski, A. D.), 802, 803, 804, 806, 807, 823, 824, 827, 828, 829, 959, 969
Arkona Sea, 753
ARMAUER HANSEN, 219
Armstrong, F. A. J., 303, 351
Arndt, W., 1084, 1152
Arno Atoll, 1103
Arnold, D. C., 404
Arnold, Edgar L., 60
Arnold, J. R., 243
Arnold, Zach M., 1076
Arnoldi, L. V., 869
Aroe basin, 229
Arrhenius, G., 244, 282, 283, 447, 450
Arrhenius, Svante, 159, 160, 926
Arriola, F. J., 1152
Artemia, 146, 150, 700, 711, 712, 716
 gracilis, 1176
 salina, 853, 854, 1176, 1177
Arthropoda, 424
 carbonate deposition by, 269
 fauna of algae, 1154
Arts, L. des., 1188
Asabellides sibirica-Nucula tenuis community, 520
Asane, Nagao, 1041
Ascaroidea, 422
Aschelminthes, 422
Ascidia, 1199
 atra, 1198
 callosa, 394
 ceratodes, 349, 1198
 uptake, 350
 paratrapa, 394
 samea, 1199
Ascidiella aspersa, 847, 1199
Asclepios, 1179
Ascophylla nodosa (or *Ascophyllum nodosum*), 371, 564, 788, 1043, 1045, 1047
Ascothoracida, 426
Asellota, 426
Asellus aquaticus, 779, 783
Ashworth, J. H., 432, 501, 1090, 1113, 1117, 1122
Aspidobothria, 421
Aspidobranchia, 1149
Aspidocotylea, 421
Aspidogastraea, 421
Aspidosiphon, 1091
Asplanchna, 856
Assal Lake, mortality, 978
Association, 47
Astacus, blood, 269
 leptodactylus, 898
 pachypus, 898
Astarte, 785
 borealis, 476, 477, 495, 783, 789
 elliptica, 477
 montagui, 477, 495
 sulcata, 495
Asteracanthion rubens, 419
Asterias, 265, 487
 forbesi, 487, 1189
 glacialis, 494
 rubens, 480, 494, 495, 498, 776, 777, 1189
Asterionella japonica, 351, 1062
Asterocheres, 425
Asteroids, 1187
Asterape mariae, 1162
 oblonga, 1162
Astomata, 419
Astrangia, 636
Astrospora, 619, 622, 623, 628
Astropecten, 595
 aranciacus, 1190
 marginalus, 1192
Astrosphaeridae, 1071
Athanas, 847
Atherina, 868, 899, 903, 908
 mochon, 861, 863
 requeti, 1051
Atkins, W. R. G., 109, 110, 111, 118, 119, 297, 310, 311, 313, 351, 1041
Atkinson, G. T., 947, 978
Atlantic copepods, deep water, 219, 1165
Foraminifera, 1078
Atlantic, North, oxygen changes in, 201
 oxygen consumption, 195
 zooplankton, 1168
 oxygen, 219
 oxygen consumption, 194
 oxygen-minimum zone, 220
 phosphates, 321
 Radiolaria, 1070
 reefs, 627-628
 South, Radiolaria, 1071
ATLANTIS, 196, 199, 215, 219, 320
Atlantis (the lost one), 1019
Atlas of Sea Surface Temperatures, 376
Atoda, K., 1090
Atoll, cross section (fig.), 616-617; plate, facing 620
Atoll Reefs, 614
Atolls, 614
Atriplex, 725, 1057
 arenaria, 1056
Attractive substances and larvae, 483-484
Atya africana, 1152
Atyidae, 142, 696, 1152
Audouin, V., 1, 9
Audouinia tentaculata, 494
Augener, H., 1122
Aughtry, Robert H., 988
Auks, 1221
Aulacanthidae, 1071
Aulorhynchus flavidus, 635
Aurelia (= *Aurellia*), 142
 aurita, 757, 777, 778, 794, 833
 in Baltic, 762
Austin, Lynn H., 230
Austin, T. S., 449, 573, 575, 576, 577, 612, 951, 952, 1020, 1100
Australia, algae, 1046
echinoderms, 1188
estuaries, 680
fishes, 1209
Autecology, 9

- Avagina incola*, 420
Avicennia, 624, 728
 alba, 1056
 nitida, 1053
Avrainvillea, 623, 1046
 Awati, P. R., 1129
 Ax, P., 595
 Axelrod, D. L., 10, 729
Axinus, 655, 659
Axinopsis sericalus, 393
 Azoic region, 969
 Azoic zone, 959
 Azores mortality, 988
 Azov, Sea of, 713, 801, 854-861, 947, 957
 biocoenotic classification, 860-861
 benthic associations (fig.), 859
 benthos, 857-860
 biomass, 857
 communities, 857-861
 fisheries, 865
 fish fauna, 865, 867
 mortality, 983, 986
 phytoplankton, 855-856
 plankton, 856
 productivity, 865
 salinity, 855
 zoobenthos, 858
 zooplankton, 856
 Beardseth, E., 571, 1041
 Baas-Becking, A. V., 263
 Bass-Becking, L. G. M., 711, 1035
 Bacci, G., 509, 512
 Bachmayer, F., 1156
 Backlund, Helge O., 1175
 Bacteria, 1035-1040
 in Black Sea, 826
 in beaches, 593
 in carbonate precipitation, 259
 and diatoms, 1066
 deep-sea, 503
 decomposition, 305-308
 in estuaries, 711
 in nutrient decomposition, 309
 and phosphate, 304
 productivity, 503
 in sediment, 733
 and red water, 958
Bacterium calcis, 260
Bactromorphus thoracites, 1032
Baculogypsinoides spinosus, 1077
 Baer, Jean G., 408, 417, 424, 426
 Baerends, G. P., 42, 1210
 Baffin Bay (Greenland), 222
 Baffin Bay (Texas), 716
 Bagenal, T. B., 78, 1219
 Baggerman, B., 1143
 Bagnold, R. A., 587
 Bahama Bank, aragonite, 256
 Bahamas, corals, 1102
 Bahamite, 285
 Baier, C. R., 260, 1035
 Baikal, Lake, 900, 901
 mortality, 976
 Bailey, B. E., 164
 Bainbridge, R., 480, 1166
 Baird, Spencer F., 3, 4
 Baker, H., 1090
 Baker, M., 383, 384
 Baker, S. M., 560
Balaena mysticetus, 1223
Balaenoptera borealis, 1225
 Balance sheet, marine, 38-39
Balanoglossus, 472, 623
 Balanoid zone, 542, 550
 Balanomorpha, 426
Balanus, 542, 857, 1158
 amphitrite, 373, 697, 713, 1024
 communis, 1028
 balanoides, 373, 376, 480, 1020, 1148, 1158, 1159
 cariosus, 567
 crenatus, 1019, 1158
 eburneus, 716, 908
 glandula, 550, 567
 improvisus, 790, 793, 843, 845, 847, 853, 908, 1024
 -*Mytilus-Littorina* community, 1053
 Baldwin, E., 142, 145
 Baldwin, F. M., 688
 Balikpapan, mortality, 982
 Balls, plant, 1054, 1055
 Balss, H., 392, 399, 402, 1151, 1152
 Baltic Ice Lake, 769
 Baltic Sea, 221, 751-800
 archipelagos, facing 782
 bottom fauna of, 789; facing 783
 brackish-water organisms in, 780
 chart, 753
 distribution limits in, 775
 endemics, 785
 fishes, 1208
 geography of, 752, 753
 geomorphology of, 768
 glacial relicts in, 782
 history of, 769
 hydroclimographs (fig.), 761
 immigrants, 785
 insects in, 776, 779
 lacustrine organisms in, 779
 marine organisms in, 775
 molluscs in, 779
 mortality, 983, 986
 nutrients, 316, 766
 oxygen, 765
 pH, 766
 plants in, 780, 788
 plankton, 792
 relicts in, 771
 reproduction in, 777
 salinity, 149, 757, 758
 sediments of, 768
 temperature, 764
 water level in, 767
 zonation in, 767
 Baltzer, F., 1120
 Banda Trench, animals (fig.), 665
 Bandy, O. L., 263, 1076
Bangia, 845
 Bangs, O., 165, 979
 Banka Strait mortality, 982
Bankia, 1029, 1030
 gouldi, 1033
 setacea, 1030
 Banner, A. H., 700, 1090, 1153
 Bannerman, David A., 1219
 Bannwarth, 1090

- Banse, K., 480
 Banyuls sur Mer, 1028
 Baranov, F. I., 42, 1210
 Barbour, Thomas, 1213
 Bardsey Id., intertidal, 1020
 Barents Sea, 221
 copepods, 1165, 1169
 nutrients, 316
 polychaetes, 1124
Barenstia discreta, 395
 Barghoorn, E. S., 1036
 Barker, H. A., 121
 Barkey, Kenneth T., 209
 Barnacles, 1158
 Barnacles and zonation, 566-567
 Barnard, K. H., 1152
Barnea, 1029, 1030
 costata, 1143
 Barnes, C. A., 185, 209, 212, 229, 230
 Barnes, H., 53, 55, 78, 101, 102, 231, 297, 378, 1027, 1158
 Barnes, T. C., 160
 Barnstable, Mass., Foraminifera, 1079
 Barrel, Joseph, 145
 Barren zones, 562
 Barrett, O. W., 1224
 Barrier reef, 624-625; facing 627
 Barrios, Theod., 977
 Barrows, Albert L., 1029
 Bartlett, H. H., 1052
 Bartlett, J. R., 978
 Bartholomew, J. W., 1036
 Bartsch, Paul, 1029
 Bary, Brian McK., 957, 980, 982
 Bascom, W. N., 55, 587, 588, 591
 Bassett-Smith, P. W., 1091
 Bassindale, R., 150, 677, 678, 685, 701, 702, 703, 1016, 1023, 1153
 Bassler, R. S., 1110
Bassogigas, 661
 (*Bythites*) *crassus*, 654
Bassozelus, 653
 Batavia, Bay of, 625
 coral growth, 1091
 reefs, 1102, 1103
 Batchelder, C. N., 554
 Bateson, W., 150
 Batham, Elizabeth J., 1158
Batholhauma, 643
 Bathyal, 21
Bathydactylus kroghi, 656
Bathycrinus, 661
 aldrichianus, 653
 australis, 658
 sp., 658
 Bathymetric zones, 2, 18-23, 27
 Bathymetry of deep sea (fig.), 644
Bathymicrops, distribution, 667
 regius, 665
Bathynomus giganteus, 1152
Bathyopsurus nybelini, 660
 Bathypelagic fauna, 368
 zone, 643
Bathyporeia, 1153
 pilosa, 781
Bathypterois, 653
 Bathyscaphe, 54
 Bathysphere, 54
Bathytrochus hexagonus, 654
Batillaria minima, 576
 Batjan Basin, 229
Batrachium, 782
 Battey, T. F., 1172
 Batum, plankton, 831
 Baturin, V. P., 803
 Baudoin, R., 1178
 Bauer, V., 1052, 1188
 Baughman, J. L., 949, 964, 968, 978, 984, 1129
 Bavendam, W., 178, 260, 1036
 Bay shores, 718
 Bayer, Frederick M., 1105
 Bayliss, W. M., 135, 141, 143
 Bazikalova, A., 498
 Bdelloidea, 422
 Bdelomorpha, 422
 Bdelonemertini, 422
Bdellostoma, 1203
Bdelloura, 420
 Beach Erosion Board, 676, 731
 Beach rock, 258, 285
 Beach slope, 588
 Beaches, 587-608
 ecological zones, 599
 paleoecology, 604-605
 populations, 597, 935-939
 seasonal changes, 587
 temperature in, 588
 terminology, 588
 water table, 588
 width, temperature and waves (fig.), 590
 Beadle, L. C., 135, 136, 137
 Beak, T. W., 73
 Beales, F. W., 285
 Beam trawl, 75; (fig.), 75, 76
 Beanland, F. L., 1023
 de Beauchamp, P. M., 9
 Beauchamp, R. S. A., 73
 Beaufort, N. C., 1026
 sessile fauna, 1019
 Beauge, L., 1206
 Beaven, G. Francis, 946
 Becher, S., 1193
 Becker, H. G., 190
 Beddard, F. E., 1219
 Beebe, William, 54, 1213
 Beeby Thompson A., 980, 985
 Beerstecher, Ernest, 963
Beggiatoa roseo-persicana, 986
 Behrens, Gerda F., 872
 Belchenko, K., 818
 Belemnites, 967
 Bellinghausen Sea, 951
 mortality, 979
 Bellini, R., 258
 Bellotti, C., 977
 Belt Sea, 753
 Belyaev, G. M., 654
Bembidium varium, 846
 van Bemmelen, R. W., 974, 976
 Benecke, W., 1036
 van Beneden, P. J., 3
 Benguela Current, 447, 964
 Benham, W. B. 1122
 Bennett, A. G., 1219
 Bennett, George, 1139

- Bennett, Isobel, 362, 1016, 1017, 1175
 Bent, A. C., 1219
 van Benthem Jutting, W. S. S., 898, 1144
Benthescymus longipes, 654
 Benthic associations, Sea of Azov (fig.), 859
 Benthic classification and terminology, 18-23, 27
 complexes, Black Sea (fig.), 844
Benthodytes, 652, 654
 sanguinolenta, 658
 Benthograph, 56
Benthophilus, 862, 895, 899
 Benthos, Aral Sea, 915
 Black Sea, 839-851
 of canyons, 637
 Caspian Sea, 905, 906, 910, 912
 deep sea, 651-669
 Sea of Azov, 857-860
 waddens (fig.), 723
 Benzer, P., 266
 Berdichevsky, L. S., 865
 Berg, L. S., 378, 1203
 Berger, Josef, 983
 Bergmann, A., 1219
 Bering Sea, 332
 oxygen, 229
 fishes, 1206
 plankton, 1166
 Berkeley, C., 260, 429, 1122
 Berkeley, E., 1122
 Berlese, A., 73
 Berm, 587
 Bermuda mortality, 978
 reefs, 1090
 sponges, 1085
 Bernard, F., 663
 Bernatowicz, Albert J., 1052
Berndtia purpurea, 1033
 Berner, L. D., 1201
 Bernstein, T., 1070
Beroë abyssicola, 429
 cucumis, 792
Berosus spinosus, 776
 Berrill, N. J., 497, 1197
 von Bertalanffy, Ludwig, 33
 Bertel, R., 110
 Bertelsen, E., 505, 508, 517, 518
 Bertram, G. C. L., 280, 281, 1091, 1224
 Bertrand, Didier, 1198
 Beth, K., 1027
 Bethe, H., 136
 Bevelander, G., 266, 267, 351
 Beveridge, A. E., 554, 557
 Beveridge, R. J. G., 43, 45
 Beveridge, W. A., 1041
 Beverton, R. J. H., 42, 1210
 Bhimachar, B. S., 953, 957, 958, 985
 Bidder, George, 1084
Biddulphia, 851
 aurita, 1059
 mobiliensis, 121, 123
 regia, 122, 123
 sinensis, 1064
 Biebl, R., 1042
 Biederman, W., 266
 Bieri, R., 75
 Bigelow, H. B., 173, 185, 186, 452, 960, 979, 982, 1203, 1206
 Bigelow, R. P., 436
Bigenerina irregularis, 264
Biggardia bermudense, 419
 Bikini, algae, 1048
 carbonate deposition, 273
 plankton, 1167
 reef flat, erosion, 277
 reefs, 1097, 1101
 Billiard, G., 1213
 Biochemical cycle, 384
 Biocoenosis, 5, 40, 470, 722, 1131
 Sebastopol (fig.), 844
 classification, Black Sea, 848-849
 Sea of Azov, 860-861
 principles, 42
 Biofacies, 707
 Bioherm structures, 285
 Bio-index, 478
 Biological Abstracts, 1011
 Bioluminescence, 645
 Biomass, 35; (defined), 489; 869
 bacteria, 1036, 1038
 Caspian Sea, 907
 plankton, Black Sea, 837-838
 Plymouth, 38
 salinity gradient (Table), 704
 Sea of Azov, 857
 Sivash, 713
 Biome, 43
 Biospace, 535
 Biosphere, divisions, 361
 Biota, Aral Sea, 915
 La Jolla canyons, 635
 Biotic factors and communities, 471
 Biotope, 40
 versus biocoenoses, 473
 Biopolarity, 176, 377-378
 Birch, L. C., 33, 41, 47, 1012
 Birds, 1219
 Caspian Sea, 912
 mortality, 980, 987
 Birge, E. A., 67
 Birge-Ekman grab, 67
 Birket el Gessabaia, 697
 Birkett, L., 65, 509
 Birshtein, J. A., 654, 861, 865
 Biryuzova, V. I., 823, 824, 825
 Biscay, Bay of, fauna, 653
 Bishop, David W., 212
 Bishop, L. M., 951, 953
Bilhynia tentaculata, 779
 botnica, 779
Bilhynis, 622
 Bituminous rocks, 961
 shales, 962
 Bitter Lakes, 713
 Bivalve Reefs, Black Sea, 847
 Bjerrum, Jannik, 347
 Bjerrum Niels, 231
 Black, E. C., 1029
 Black, M., 257, 260, 261
 Black, Virginia S., 144
 Black, W. A. P., 352, 353, 354, 1042
 Black layer, 592
 Black Sea, 11, 131, 801-889, 957, 971
 alkalinity, 821
 ammonia, 822
 bacteria, 826

- benthic complexes (fig.), 844
 benthos of, 839-851
 bivalve reefs, 847
 carbonate precipitation in, 821
 carbonates, 821, 830
 coastal lagoons, 849-861
 coastal zone, 846
 currents (fig.), 816
 deep-sea deposits, 829
 density gradient (figs.), 809, 812
 fish fauna, 865
 fisheries, 865-868
 flora of, 840
 glacial history, 804
 history of, 802; (figs.), 802, 805, 806
 hydrogen sulfide, 193, 809, 812, 815, 820-822
 hydrography, 808
 limans, 849-861
 micro-organisms, 825, 826; (fig.), 827
 mortality, 983, 989
 mud zones, 847
Mytilus-Ostrea banks, 848
 nitrate, 822
 nutrients, 822, 869
 organic cycle, 823-826
 oxygen, 193, 221, 809, 821
 oysters, 1132
 phosphate, 822, 823
 phytoplankton, 831, 832
 phytoplankton biomass (fig.), 837
 cycle, 869
 plankton, 455, 823, 830, 836, 839
 biomass, 838, 841, 870
 productivity, 870
 plants (fig.), 841
 productivity, 865-872
 salinity, 809, 813
Sarda sarda in, 867
 sediments, 827-830; (figs.), 807, 828
 shelf deposits, 828
 shore community, 849
 stability relations (fig.), 815
 strand zone, 845-846
 sulfate, 821
 temperature, 809, 810, 811
 thermocline, 811
 trophic relationships, 871
 water exchange, 819
 zoobenthos, 842
 zooplankton, 832, 833
Zostera meadows, 847
 Black shales, 970, 971
 Blackburn, Kathleen B., 957
Blackfordia virginica, 908
 Blackwelder, Eliot, 964, 968
 Blackwelder, R. E., 1178
 Blanc, A. C., 804, 805
Blastoderma, 1037
Blastodinium spinulosum, 418
 Blegvad, H., 6, 165, 467, 483, 493, 497, 499, 505, 509, 510,
 512, 516, 935, 947, 968, 978, 1206
Blennius, 843
 stuiatillis, 862
 vulgaris, 863
Blidingia minima, 1044
 Bligh's passage, facing 627
 Blinks, L. R., 36, 124, 125, 140, 141, 262, 263
 Blue crab, 146, 147, 1153
 Blue-green algae, 261, 957, 1049
 Blum, H. F., 1030
 Blum, John L., 1042
 Blomquist, H. L., 1042
 Blüthgen, J., 762
 Böcher, T. W., 1052
 Bock, S., 1120
 Boden, B. P., 301, 453, 454, 481, 611, 1060
 Bodenheimer, F. S., 23, 99
 Boeroe Basin, oxygen, 228
 Boettger, C. R., 150, 151, 786, 1144
 Bogachev, V. V., 803
 Bogdanova, I. V., 1036
 Bøggild, O. B., 266, 273, 280, 968
 Bogorov, V., 1165
 Bogucki, M., 269
 Bohling, M. H., 560
 Böhnecke, G., 956
 Bohr, C., 244
 Bolin, R. L., 558, 568, 577
 von Bonde, Cecil, 56, 69, 959, 969
Bonellia, 423, 482
 Bones in marine sediments, 968
 Bonnet Carré Spillway, 946
 Bonnot, Paul, 981
 Boobies, 1219
Boodlea, 623
 Boomer Beach, La Jolla, 587
 Bopyroidea, 426
 Borcea, I., 507, 508, 510, 512, 840, 846, 847, 848, 865, 947
 Borchert, H., 246
 Borgert, A., 1070, 1073
 Børjesen, F., 1042, 1052
 Borgstrom, Georg A., 955
 Boring algae, 279, 1030
 Boring animals, 280, 1029-33
 Boring sponges, 1132
 Borings, on reefs, 629
Borlasia vivipara, 846
 Bornholm Sea, 753
Borophryne apogon, 643; facing 650
 Borradaile, L. A., 171, 400, 1012
Borrchia, 726
 Bortuski, E. V., 68
 Boschma, H., 438, 1091, 1152
 Boshkov, L., 865
Bosmina coregoni maritima, 781, 786
 maritima, 768, 793
 Bosphorus, currents, 818-820
 plankton, 836
Bostrychia, 541, 1046
 tenella, 1049
 Bothnia, Gulf of, 753
 Bothnian Bay, 753
 Bothnian Sea, 753
Bothriocephalus scorpii, 422
Botryocladia, 1046
Botryococcus, 901
 braunii, 914, 957
Botryllus, 846
 schlosseri, 847, 1199
 Bott, R., 898
 Bottom associations in Varna Lake (fig.), 852
 Bottom communities, 7, 45, 461-534
 Black Sea, 845-849
 Varna Bay (fig.), 859

- Bottom deposits, Radioaria in, 1069
 Bottom fauna of Baltic, 789; facing 783
 Bottom grabs (fig.), 62
 Bottom invertebrates, depth of occurrence, 503
 Bottom layer, oxygen in, 215
 Bottom samplers, fresh water, 67
 Bottom waters, oxygen, 213-216
 Boubier, Maurice, 1219
 Boucot, A. J., 42, 417
 Bougis, P., 1044
 Boulenger, G. A., 1211, 1215
 Bourcart, J., 634, 730, 731
 Bourdillon, A., 407
 Bourlière, F., 1219
 Bourn, W. S., 727, 1052
 Bourne, G., 266
 Bourne, G. C., 264, 1091
 Boutan, L., 55
 Bouvier, E. L., 407, 1091
 Bowen, R. L. B., 1188
 Bowen, V. T., 302, 352, 353, 354
 Bower, Ward T., 960, 974, 987
 Bowman, H. H., 1052
Box boops, 418, 419
 Boyce, S. G., 727, 1052
 Boycott, A. E., 687
 Boyd, D. W., 263, 355
 Boyd, W. L., 951, 953, 958
 Boyle, Marie, 1043
 Boysen-Jensen, (see Jensen, P. B.)
 Braarud, T., 121, 169, 171, 192, 300, 305, 444, 446, 447, 448, 453, 953, 983
 Brachiata, 1197
Brachidontes, 272
 minimus, 697
 Brachiopod shells, 266
 Brachiopoda, 424, 1113
 carbonate deposition by, 266
Brachionus, 700
 bakeri, 856
 mülleri, 856
 Brachyura, 1152, 1153
 Brackish water, 11, 23, 131, 764
 fauna, 705
 Foraminifera, 1077, 1078
 organisms in Baltic, 780
 species (fig.), 703
 sponges, 1085
 terminology 23-25
Branchellion raveneli, 423
Branchiommata vesiculosum, 494
 Branchiopoda, 425
Branchiostoma, 596, 848
 lanceolata, 846
 Branchiura, 425
Brachyotus lucasi, 847
 Brackett, F. S., 231
 Bradley, J. S., 257, 628, 1100
 Bradley, P. S., 1162
 Bradshaw, J. S., 75, 264
 Brady, F., 1016
 Brady, H. R., 1076
 Bramlette, M. N., 261, 283
 von Brand, T., 306, 492, 494, 1012
 Brandt, K., 143, 151, 311, 431, 432, 1070, 1073, 1207
 Branner, J. C., 1091
 Brant, James, 977
 Brattström, H., 521, 732, 752, 753, 757, 764, 777, 1110, 1122, 1152, 1188
 Braun-Blanquet, J., 469, 477
 Brazil, Bryozoa, 1110
 corals, 1095
 reefs, 1091
 zonation, 1047
 Breakwater, zonation on, 564
 Brebeck, C., 1037
 Breder, C. M., 141
 Breeding, in tropics, 170
 Brennecke, W., 187, 219, 230
 Bresslau, E., 1119
 Brett, J. R., 166
Brevortia gunteri, 709
 tyrannus, 709
 Brian, M. V., 1144
 Bridge, T. W., 1203
 Bridgeman, P. W., 646
 Brinkley, S. R., Jr., 254
 Brine shrimp, 146, 150
 Brines, bacteria in, 1037
 composition, 712
 Brisou, J., 1036
Brissopsis, 472, 477
 lyrifera, 495, 1192
 Bristol Channel, fauna, 1023
 British Guiana, estuaries, 1023
 British Isles, echinoderms, 1194
 Broch, Hjalmar, 68, 468, 1106, 1107, 1108
 Brock, J., 434
 Brock, V. E., 974
 Brocklesby, H. N., 164
 Brockmann, C., 693, 710, 731, 734
 Broderip, W. J., 1113
 Broekema, M. M., 139
 Broekhuysen, G. J., 139, 162, 163, 497, 536, 541, 560, 688, 713, 1023, 1144, 1153, 1219
 Brogmus, W., 88-90, 91, 92
 Brongersma-Sanders, M. (also, Sanders, M., 1934), 449, 941, 951, 955, 956, 957, 959, 962, 968, 969, 970, 979, 981, 983, 984
 Brooks, H. K., 1175
 Brooks, J. L., 901
 Brooks, S. C., 1219
 Brooks, W. K., 266, 1129
 Bronnimann, Paul, 1076
Brosmius brosmie, 960
 Brotskaya, V. A., 489, 491, 493, 505, 515, 518
 Brouardel, Jean, 215, 647
 Brown, E. S., 1178
 Brown, H. H., 497
 Brown, L. B., 573
 Brown, R. S., 1123
 Brown, Roland W., 1051
 Bruce, J. R., 588, 589, 592, 593, 596, 689
 Brueggemann, F., 1091
 Bruevich, S. V., 869
Bruguiera, 624
 Brundin, L., 766
 Bruins, H. R., 196
 Bruneau, L., 204, 214, 215, 223, 226, 647
 Brunelli, G., 400, 401, 925
 Bruno, A., 141
 Brust, H. F., 688, 689, 690
 Bruun, Anton F., 21, 64, 501, 503, 507, 641, 650, 663, 1144

- Bryan, J., 1029
 Bryozoa, 423, 1109-1110
 carbonate deposition by, 266
 as epizoics, 395
 Brotulidae, 667
Bubyr caucasicus, 862
Buccinum, 803, 1146
 undatum, 494, 495, 498, 1150
 Buccerphalidae, 421
 von Buch, L., 974
 Buch, K., 187, 243, 254, 320, 766, 794
 Bucher, W. H., 10, 734
 Buchholz, H., 787
 Buchner, P., 429, 430, 432, 438
 Buchinsky, P. N., 854
 Bude, K., 980
 Budget, water, 99
 Buehrer, T. F., 255
Bufo boreas halophilus, 1212
 bufo, 1211
 calamita, 1211
 marinus, 1211
 melanostictus, 1211
 raddei, 1212
 viridis, 1211, 1212
Bugula, 658, 846
 neritina, 1028
 Buitendijk, A. M., 787
 Bujor, P., 853, 854
 Bulgarian lagoons, 853
 Limans, 851
 Salt Works, 853
 Bulk density of mud, 727
 Bull, H. O., 498
Bulla hydatis, 497
 Bulletin of the Beach Erosion Board, 587
 Bullis, Harvey R., 75
 Bullock, T. H., 166, 168, 377, 477, 522
Bulminia, 1079
 Bumpus, D. F., 57, 446, 1118, 1168
 Bumpus, Hermon C., 979
 Bunge, G., 142
Bunodactis, 400
Bunodeopsis, 400
 Buoys, fouling, 1027
 Burdon-Jones, C., 1197
 Bürger, O., 399, 400, 1119
 Burgess shales, 967
 Burma mortality, 989
 Burke, V., 1036
 Burkenroad, M. D., 7, 42, 602, 937, 1210
 Burr, J. G., 977, 978
 Burris, R. H., 1049
 Burrowing crabs, 721, 1154, 1156, 1157
 crustacea, 1153
 Burrows, Elsie M., 1043
 Burt, Wayne B., 113
 Burton, Maurice, 1084
 Burt, J. L., 980
 Busk, George, 1110
Busycon, 1144, 1146
 carica, 1147
 Butkevich, V. S., 1036
 Butler, E. A., 1178
 Butler, M. R., 309, 1066
 Butler, Philip A., 174, 946, 1129
 Bütschli, O., 273
 Buxton, P. A., 148, 1178
Bythinia tentaculata, 783
 Bytinski-Salz, H., 1130
 C¹⁴ technique (photosynthesis), 79-80, 193
 Ca/Mg ratio modern sediments, 240
 Precambrian rocks, 240
 Cabasso, V., 957, 986
 Cable, Louella E., 166
 Caddis flies, in Caspian Sea, 914
 Cadenat, J., 983
Caecijaera, 426
Cafius, 846
 xantholoma, 848
 Caithness, intertidal, 1019
Cakile maritima, 1057
 -Salsola, 1052
Calamagrostis epigeios, 1057
Calanipeda aquaedulcis, 856, 901
 Calanoida, 425
Calanus cristatus, 1165
 finmarchicus, 452, 792, 1165, 1166, 1167, 1168, 1169
 helgolandicus, 833, 834, 1168
 hyperboreus, 452
 plumchrus, 1165, 1167
Calappa, 1154
 Calcareous skeletons, 275
 sponges, 264
Calcarina, 618, 619, 276
 Calcispongia, 1083
 Calcite, 239, 250
 algae, 261
 -aragonite relations, 272
 precipitation, 259
 solubility, 252
 Calcium geoecology, 240
 equilibrium, 241
 and permeability, 137, 141
 uptake, 351
 Calcium carbonate, ionic products, 265
 isotope content, 276
 precipitation, 1036, 1037, 1038
 in sediments, 244, 731
 solution of, 277
 Calcium oxalite, in algae, 263
 Caldwell, L. T., 731
 California, coast, ecology, 1018
 nutrients, 335
 Current, 332
 Foraminifera, 1076
 mortality, 987
 province, 364
 Gulf of, algae, 1044
 mortality, 981
 oysters, 1130
 Caligoida, 425
Caligus, 421
 rapax, 425
 Callao mortality, 976, 981
 Callendar, G. S., 244
Calliactis, 399
 algoensis, 401
 armillatus, 401
 japonica, 401
 miriam, 401
 parasitica, 401
 tricolor, 400
 variegata, 401

- Callianassa*, 396, 409, 721, 847, 1025
 commensals, 397
 Callianassidae, 1157
Callinectes danae, 152
 sapidus, 146, 147, 422, 426, 985, 1025, 1151, 1153
Callinectes laeviusculus, 777
Calliostoma, 636
Callithamnion, 841
Callizoa, 1121
Callorhynchus milii, 421
 Calman, W. T., 1030, 1152
Calocalanus, 833
Calocaris mc'andreae, 495
Calothrix, 261, 541, 549, 550
 crustacea, 549, 1044
 parietina, 1049
 pilosa, 549
 pulvinata, 549
 scopulerum, 549, 1044, 1045
 vivipara, 549, 1044
 Calvin, J., 505, 542, 556, 567, 1015
Calyptrea chinensis, 805, 846, 847
 Camargue, 729, 1026
 Cameras, underwater, 56
 CAMBRIDGE SUEZ CANAL Expedition, 713
 Cameron, M. L., 302
 Campeche, Gulf of, 1018
 Van Campen, W. G., 1209
Cancer, 637, 1156
Cancrincola, 425
 Candiru, 427
 Canet Marshes, 1052
 Cannon, H. G., 147, 1162
 Cannon, W. B., 34
Cantoria, 1215
 Canu, F., 1110
 Cape Ann, Massachusetts, communities, 1017
 Capelin mortality, 987
 Capillary level, beaches (fig.), 589
Capitella capitata, 847
 CAPRICORN Expedition, 280
 Capsizing, 301
Caranx, 403
Carapus, 404, 427, 622
 Carbon, abundance, 241
 cycle, 30, 32
 fixation, 38
 isotopes, ratios, 244
 juvenile, 246
 origin of, 245
 -oxygen isotopic relationships, 274
 partition, 241
 ratios, in algae, 262
 from volcanoes, 246
 Carbon dioxide, 133, 239-285
 abundance, 241
 increase, 244
 concentration, 247, 253
 cycle, 241, 688
 deep sea, 647
 exchange, 244
 equilibrium, 241, 248
 fluxes, 242
 interstitial water, 592
 system, 246
 Carbonates, 239-295
 Black Sea, 821, 830
 characteristics, 270-271
 concentration, 253, 254
 cycle, 245
 deposition at Bikini, 273
 precipitation by bacteria, 259
 sediment types, 285
 solubility, 250, 251, 254
 solubility products, 250, 255
 solution, inorganic, 278
 organic, 279
Carcinides [or *Carcinus*] *maenas*, 136, 137, 139, 419, 426, 494, 497, 987, 1153
Carcinonemertes carcinophila, 422
Carcinoscorpius rotundicauda, 1172, 1173
Cardiophilus, 864
Cardisoma, 602, 721, 1156
 armatum, 147
 guanhumu, 1156
Cardium, 150, 594, 595, 623, 803, 846, 853, 857, 899, 908, 987
 corbis, 498, 1148
 crassum, 987
 edule, 420, 435, 477, 495, 497, 601, 680, 697, 713, 777, 783, 789, 790, 804, 805, 807, 847, 852, 895, 914, 978, 1050, 1143, 1144, 1146; fig., 594
 communities, Sea of Azov, 858, 860
 -*Syndosmya ovata* community 858-860
 exiguum, 846, 847, 848
 fasciatum, 494, 495, 497
 groenlandicum, 477, 498
 simile, 845, 847, 848
 tuberculatum, 805
Caretta caretta, 846
 Carey, C. L., 306, 309, 1039
 Caribbean, oxygen, 220
 Carillo, D. C. N., 981
Carinosoma, 900
 Carl, G. Clifford, 1023
 Carlgren, Oskar, 399, 400, 401, 402, 653
 Carlisle, A. J., 399
 Carnahan, J. A., 557
 CARNEGIE, 212, 225, 226, 227, 330, 333, 335
 Carnivora, 1223
 symbiosis in, 430
 Carolina coast, biota, 1020, 1021
 Carotenes, 963
 Carotenoids, 121, 124, 963
 Carpenter, G. H., 1178
 Carpenter, P. Herbert, 1183
 Carpenter, S. J., 1178
 Carpenter, W. L., 185
Carpophyllum, 542
 Carr, Archie, 1213
 Carrigy, M. A., 258, 279
 Carriker, M. R., 679, 1130, 1144
 Carritt, D. E., 187, 189, 231
 Carter, H. J., 983, 985
Carteria, 121, 430, 593
 Cary, Lewis, R., 1105
Caryophyllia, 636
 arcuata, 1095
 clavus, 1093, 1095
 Cascading, 301
 Caspers, H., 45, 47, 469, 470, 473, 474, 504, 505, 507, 508, 509, 510, 515, 517, 520, 553, 596, 691, 702, 713, 801, 818, 828, 832, 840, 841, 843, 845, 846, 848, 849, 850, 851, 852, 853, 865, 866, 867, 868, 922, 987, 1023, 1027, 1179
Caspia, 806

- Caspialosa*, 866, 868, 895, 899, 904
 maeotica, 862
 tanaica, 862
 Caspian basin, 803
 Caspian Sea, 131, 891–913, 947
 acclimatization in, 904, 906–912
 benthos, 906, 910
 birds, 912
 colonization in, 908
 and Aral seas composition, 914
 currents (fig.), 893
 element, in Black Sea, 863
 endemics, 897, 899
 fauna, 863–865, 895, 900, 903
 and Mediterranean fauna, 898
 fishes, 903–904
 flora, 895
 herrings, 904
 hydrogen sulfide, 895
 nutrients, 895
 oxygen, 895
 phytoplankton, 901
 phytobenthos, 902
 plankton, 902
 salinity, 894
 seal, 900
 temperature, 894
 vertical migrations in, 902
 zoobenthos, 903
 zooplankton, 901, 902
Caspiosoma, 862
Cassidulina, 1077
Cassiopea, 436, 437, 438
 Castanellidae, 1072
 Castillo, L., 1130
 Castle, W. E., 164
 Castracane degli Antelminelli, A. F., 1060
Casuarina, 725
 Catala, R., 622, 1091
Catapagurus sharreri, 402
Caudina, 1193
Caulastrea furcata, 1090
Caulerpa, 618, 623, 1046
 verticillata, 1046
 Caullery, M., 408, 417, 947, 1123
 Causey, D., 1152
 Cayeux, L., 963, 966
 Cayman Basin, oxygen, 220
 Celan, M., 839, 841
Celestus hancocki, 1214
 Cell-lineage studies, 5
 Cellulose acetate filters, 384
 Celtic province, 360
Cellis occidentalis, 1151, 1155
 Centipedes, 1175
 Central Pacific, sponges, 1085
Centrechinus setosus, 622
 Centrifuge, plankton research, 4
Centriscus heinrichi, 942
 scutatus, 942, 989
Centrocorone, 847
Centropages hamatus, 792, 1166, 1168
 kroyeri, 833, 834, 856
 typicus, 1165, 1168
 Cepède, C., 1123
 Cephalocarida, 1175
Cephaloidophora olivia, 418
Ceramium, 707, 788, 845
 ciliatum, 1047
 diaphanum, 839, 857
 pacificum, 575
 rubrum, 839
 tenuicorne, 782, 1045
Ceraplectana trachyderma, 658
Ceratias, 427
 Ceratioidea, 643
Ceratium, 831
 furca, 851
 fuscus, 123
 tripos, 123
 tripos balticum, 792
Ceratocephale osawai, 922, 1125
Ceratomyxa hopkinsi, 419
 mesospora, 419
Cerataulina, 870
 bergonii, 830, 831
Cerberus, 1215
 rhynchops, 1214
Cercopages, 856
 pengoi, 856
Cercopagis gracillima, 901
Cercyra papillosa, 846
Cerianthus vestitus, 845
Ceriops, 624
Cerithiolum, 848
Cerithium, 803
 community (fig.), 515
 pfefferi community, 514
 reticulatum, 805
 Cerruti, A., 393, 1191
 Cestoda, 421
Cestus veneris, 419
 Cetacea, 1223
 in freshwater, 1223
Cetotherium, 803
 Ceylon, reefs, 1100
 Chabanand, P., 1206
 Chabry, L., 265
 Chace, F. A., 453, 1152, 1153
 Chacko, P. I., 957, 986
 Chadwick, H. C., 1183
Chaetoceras, 792, 830, 855, 870, 1060
 curvisetus, 1060
 danicum, 792
 decipiens, 1060
 fuscus, 792
 radians, 831
 subtilis, 782
 wighami, 782, 792
Chaetogammarus ischmus, 865
Chaetognatha, 424, 1118
Chaetomorpha, 707
 chlorotica, 839
Chaetophora, 717
Chaetopleura apiculata, 928
Chaetopterus, 397, 472
 norvegicus, 494
 variopedatus, 494
Chalcaburneus chalcoides, 862
 CHALLENGER, 2, 3, 5, 6, 74, 185, 653, 664, 698, 964, 96
 Foraminifera, 1076
 Radiolaria, 1070
 Challengerid-zone, 1070

- Chama*, 1027
 pellucida, 636
Chamaecyparis thyooides, 1052
 Chamberlin, J. C., 1179
 Chamberlin, T. C., 145
 Chamberlin, R. W., 1178
 Chamisso, A., 1091
Champia, 707
 Champion, A. R., 69
 Chaney, Ralph W., 10
 Channels, tidal, 678
Chanos chanos, 141, 144
 Chapman, F., 259
 Chapman, G., 588, 1123
 Chapman, James, 980, 983
 Chapman, R. N., 159, 161
 Chapman, V. J., 43, 45, 536, 537, 541, 547, 550, 552, 553, 554, 557, 726, 727, 732, 1041, 1043
 Chappuis, P. A., 596
Chara, 853
 aspera, 788, 789
 baltica, 782
 canescens, 782
 crinita, 782
 toментosa, 788, 789
 Characterizing species, 475, 476; (defined), 477
 Chatham Islands, 379
 Chatton, E., 395
 Chauda stage, 804
Chaetodius, 369, 643
 sloani, 1207
 Chave, K. E., 257, 260, 261, 263, 264, 265, 266, 267, 268, 269, 270, 273, 354
Chelonia imbricata, 1217
 mydas, 1217
Chelura, 1030
Chelysoma siboja, 1199
 Chemical abundances, (table), 346
 Cherbonnier, G., 1193
 Chernev, S., 818, 847, 853
 Chernovksy, A. A., 854
 Chesapeake Bay, 11, 683, 686, 687, 688, 689, 690, 693, 730, 732, 946
 bryozoa, 1111
 fishes, 1208
 Chew, Frank, 956, 984
 Chichester Harbour, 1028
 Chidambaram, K., 951, 957, 986
 Chigirin, N. I., 810, 820, 821, 822, 823
 Chile mortality, 981
 oysters, 1130
 Chilingar, G. V., 240
 Chilka Lake, 11, 1157
 sponges, 1084
Chimaera, 23
 Chinese mitten crab, 786
 Chironomidae, 1177, 1179, 1181
Chironomus halophilus, 853
 oceanicus, 1180
 salinarius, 713, 852, 853
 Chitin-digesting bacteria, 1037, 1040
Chitonanthus abyssorum, 654
Chlamydomonas, 430, 1166
Chlorella, 123, 124, 125, 429, 430
 Chlorinity, carbonate solubility and, 251
Chlorohydra viridissima, 430
 Chlorophyll, 121, 124
 Chokhuri, N. I., 834
Chondracanthus merluccii, 425
Chondrilla, 1084
 nucula, 352, 353
Chondrocladia guiteli, 654
Chondrus, 349, 1047
 crispus, 1048
Chorda filum, 788
 Chordata, 427, 1197
 Chow, T. J., 262, 263, 264, 265, 266, 268, 269, 270
 Christensen, E. H., 12, 306
 Christensen, R. J., 454
 Chromadoroidea, 422
Chrysaora, 403
Chrysidella schaudinni, 418
Chthamalus, 564, 848, 1158
 stellatus, 564, 845, 1159
 Chubb, L. J., 1091
 Chugunov, N. L., 729
 Chugunova, N. I., 865
 Chukchi Sea, 229
 plankton, 1166
 Chumley, James, 1017
 Chun, C., 176, 178
 Churchill, E. P., 139, 1084, 1153
Cicindela, 1177
Cidaris papillata, 1192
 Cienfuegos, M., 980, 981
 Ciladi, M., 109
 Ciliata, 419, 1069
 Ciliate red water, 957
 Ciliophora, 419
 Cimmerian Epoch, 803
 Ciocárdel, R., 817, 818
Ciona, 407, 1199
 intestinalis, 349, 351, 847, 1198, 1199
 Circalittoral, 27
 Circular causal systems, 30
 Circulation, of nutrients, 337
 ocean 90, 97
 S. Atlantic (fig.), 325
 Cirripidia, 425
Cirroteuthis umbellata, 654
Cirsium arvense, 1057
 Civilization and Climate, 568
Cladophora, 619, 707, 713, 839, 857
 aegagropila, 788
 cristallina, 854
 glaucescens, 1046
 glomerata, 788, 853, 854, 1045; facing 783
Cladophoropsis, 619
 Claparède, E., 1117
 Clark, Ailsa M., 1183
 Clark, Austin H., 951, 956, 984, 1183, 1188, 1191
 Clark, Frances N., 919, 953, 981
 Clark, Hubert Lyman, 1184, 1188, 1191, 1193
 Clark, L. B., 930, 931
 Clarke, F. W., 131, 240, 242, 244, 261, 262, 264, 269, 273, 354, 686, 687, 693, 712
 Clarke, G. L., 11, 17, 57, 58, 69, 109, 110, 116, 122, 123, 192, 212, 213, 443, 446, 453, 1012, 1118, 1165
 Clarke, John M., 971, 1114
 Clarke, W. E., 1219
 Clarke-Bumpus sampler, 57-59
 Classen, Th., 980, 983, 984
 Classification, benthic, 17-23, 27
 estuaries, 679-680, 683

- chlorinity, 23
 salinity, 23
 shore line, 25
Clausocalanus pargens, 1165, 1167
Clavularia hamra, 1106
 Cleaning, by fishes, 404
 Clemens, W. A., 980, 1203, 1206
 Clements, F. E., 10, 43, 359, 468, 485, 505, 518
 Clench, W. J., 1030, 1135
Cleon, 1181
 Cleve, P. T., 178
 Cleve-Euler, Astrid, 1060
Clevelandia ios, 396, 409
Clibanarius, 624
 misanthropus, 401
 striolatus, 728
Cliona, 150, 847, 1030, 1084
 celata, 419
 frutitii, 419
 vastifica, 1033
 viridis, 1033
 Clionidae, 419
 Climatic change and fishes, 1208
 Climatic optimum, 808
 Climatic zones, land, 97
 Climax, 43, 44
 Cloud, P. E., Jr., 257, 285, 576, 618, 1092
 Cloudsley-Thompson, J. L., 1175
 Clowes, A. J., 223, 325, 326-327, 328-329
Clunio, 1181
 marinus, 846, 1179
 periodicity, 922-924
 breeding (fig.), 923
 Clunionine midges, 846, 924, 1179, 1182
Clupea harengus membras, 794
 pallasii, 987
 spratrus, 794
Clupeonella, 868, 904
 muhlisi, 862
 Clyde Sea area, 1017
Clymenella torquata, 418, 419
Clytia, 445, 595
 bakeri, 393, 395; facing 394
 Cnidosporidia, 419
 Coastal lagoons, Black Sea, 849-861
 Coastal regions, oceanography, 101
 nutrients, 311-320
 Coastal Zone, Black Sea, 846
 Coccidia, 418
Coccolloris peniocystis, 1049
 stagnina, 1049
 Coccolithophores, 120, 263, 282, 444
 Coccoliths, 261, 444
Coccolobo-manchineel, 1052
 Cocos-Keeling Islands, coral reefs, 1095, 1096
 Cod, eggs, 161
Codakia, 622, 623
 Codiaceae, 261
Codium adhaerens, 1044
 cuneatum, 1044
 dichotomum, 1044
 fragile, 1044
 Coe, W. R., 9, 171, 173, 267, 268, 368, 386, 487, 597, 935, 938,
 1030, 1119, 1144, 1194
 Coefficient of dispersion, 68
Coelambus parallelogrammus, 780
 Coelenterata, 420
 carbonate deposition by, 264
 Coelodendridae, 1072
Coeloplana, 420
Coenobita, 602
 clypeatus, 147
 Coffin, C. C., 302
 Coiling direction in Foraminifera, 1077
 Coker, R. E., 981, 1219
 Cold, resistance, 165
 Cold spells, Florida, 949
 Cold Spring Harbor sand spit, 599
 Cole, J. P., 916
 Cole, L. C., 43, 1012
 Cole, L. J., 5
 Cole, W. H., 141, 265, 269, 1172
 Cole, W. Storrs, 1075
 Colefax, A. N., 320, 982
 Coleoptera, 1181
Colidotea, 426
 Collet, Leon W., 963
 Collembola, 599
 Collid-zone, 1070
 Collier, A., 352, 567, 713, 949, 977, 978
 Collier, F. C., 982
 Collingwood, C., 403
 Collins, Grenold, 1224
 Collins, J. W., 949, 978, 979, 987, 988
 Collip, J. B., 267, 281
 Collodaria, 1069, 1070
 Colman, J., 536, 541, 555, 562, 564, 1017, 1023
 Colonization of estuaries, 693
 Colorimetric methods, 297
 Colorado River, bore, 682
Colpomenia sinuosa, 1017
Columbella lunata, 421
 Colymbidae, 1219
 Commensalism (defined), 391; 391-419, 1123
 Commensals and associates of corals, 622, 1091
 in crustacea, 1152
 origin of, 408
 Commensals (fig.), 398
 Commercial Fisheries Abstracts, 1205
 Commission zur Wissenschaftlichen Untersuchungen d.
 Deutschen Meere, 3
 Committee on Marine Ecology, 10
 Community, 30, 40, 47; (defined), 471
 name, 478
 origin of, 479
 -bottom linkage, 472
 Danish (fig.), 31
 deep sea, 651-666
 description of, 473
 division, 469
 as ecological units, 470
 as faunistic units, 470
 Sea of Azov, 857-860
 as statistical units, 467
 and substrate, 473
 Tomales Bay (fig.), 719
 Compensation depth (defined), 122; 123, 192, 446
 English Channel, 123
 Oslo Fjord, 123
 Sargasso Sea, 123
 Compensation intensity, 122, 446
 marine algae, 125
 diatoms, 123

- Compensation point (defined), 122
 Composition of estuarine environments (fig.), 703
 Composition, Caspian and Aral Seas, 131, 914
 Comrie, L., 1225
 Concepcion mortality, 976
Conchoecia, 1162
Concholepas, 426
Conchophthirus mytili, 419
 Condorelli-Francaviglia, Mario, 977
 Conger, P. S., 310, 1060
Conger, 803
 cochleata, 786
Connilembus caeci, 419
Conocarpus, 1052
 erecta, 1053
 Conover, John T., 1042
 Conn, Jean E., 1040
 Conel, J. L., 1203
 Connell, Cecil H., 953, 985
 Conrad, H. S., 1052
 Conservation of plankton, 453
 Constancy, in community (defined), 474
 Constancy, of estuary (fig.), 695
 Constructive forces on reefs, 613
 Consumption, (defined), 499
 Continental slope, 21
Contracaecum incurvum, 422
 spiculigerum, 422
Conus, 622, 803
 Convection currents, 447, 955
 Convergence, 447
 Antarctic, 216, 324, 325
 Western Atlantic, 321
Convolvata, 433, 436, 593
 movements (fig.), 436
 paradoxa, 430, 436, 438
 roscoffensis, 430, 433, 436, 437, 438
 Conway, E. J., 11, 132-133, 142, 143, 169, 245, 246
 Cook, G. H., 1172
 Cooke, C. Wythe, 1191
 Cooper, G. A., 1113
 Cooper, L. H. N., 205, 297, 298, 301, 303, 304, 305, 309,
 310, 311, 312, 313, 314, 315, 338, 453, 1023
 Cooper, W. S., 1052
 Cope, E. D., 989
 Copenhagen, L. D., 1060
 Copenhagen, W. J., 732, 954, 955, 959, 968, 970, 980, 983,
 984, 1060
 Copepoda, 425, 1165-69
 Copepods in beach (fig.), 601
 efficiency, 36
 Copper, 347
 Coquina and calcareous breccias, 285
 Coral-algal zone, 618
 Coral gall (fig.), 407
 Coral knolls, facing 626, 627
 Coral reefs, 10, 45, 609-631; facing 630
 balance, 39
 distribution, 609
 controversy, 629
 problem, 628-629
 trophic structure, 39
 Corallian facies, 1093
Corallina, 262, 567, 845, 1017
 squamata, 261
 Coralline algae, 261
 Corals, 1087-1104
 associated organisms, 622
 competition, 612
 distribution factors (fig.), 610, 1088
 food, 1087
 growth rate, 1098
 and lunar cycles, 1097
 physiology, 1096
 reef, 172
 solitary, 1095
Corbis, 623
Corbula, 803, 848, 857
 gibba, 495, 498
 gracilis, 1029
 maeotica, 860
 community, 860
 variation, 861
 mediterranea, 846, 860
 Corcoran, E. F., 79, 383, 593, 1027
Corculum cardissa, 432
Cordylophora, 864, 895
 caspia (= *lacustris*), 703, 706, 780, 782, 897
Corella parallelogramma, 1199
Corethra (= *Chaoborus*), 794
Coregonus albula, 795
 lavaretus, 795
 Cori, Carl J., 958
 Coriolis effect, in Baltic, 761
 in estuaries, 683-684, 685, 686
 Cormorants, 1219, 1220
 Corney, B. G., 925
Cornua, 1073
 Cornwall, I. E., 1158
Coronula diadema, 426
Corophium, 795, 857, 865, 897, 1157
 acherusicum, 704, 706
 bonelli, 845
 chelicorne, 898
 curvispinum, 898
 lacustre, 781
 nobile, 898
 robustum, 863, 864
 voluator, 497, 777, 783, 790, 1155
 variation, 861
 Corrêa, D. D., 601
 Correns, Carl W., 215, 352
 Corpus Christi (Texas), mortality, 949
Corycaeus anglicus, 1165
 furcifer, 833
Corynactis californica, 636
Corynosoma semerne, 422
 strumosum, 422
Corystes cassinelaunus, 1154
Coscinaraea, 615, 618, 620; facing 620
Coscinodiscus, 830, 855
 excentricus, 122, 123, 1064
 wallsii, 1062
Cossura longocirrata, 1126
 Cotronei, G., 1203
 Cott, H. B., 603
 Cottam, C., 727, 1052
 Cotton, B. C., 1139, 1141
Cottus, 784
 quadricornis, 771, 783, 794
 scorpio, 422
 Counting methods, bacteria, 1037
 Cousteau, J. Y., 54, 55
 Cousteau-Gagnan, apparatus, 638

- Couthouy, J. P., 1092
 Coward, W. E., 392
 Cowles, R. P., 399, 401, 602, 683, 686, 710
 Cox, D. C., 258
 Cox, L. R., 1130
 Crab communities, 518; (fig.), 519
 Crabs and actinians, 399
 Japan, 1157
 zonation (fig.), 722
 Craig, Gordon, 40, 47
 Craig, H., 244, 246, 257, 262, 264, 265, 267, 270-271, 274, 276
Crambe maritima, 1057
Crambessa, 403
 Crane, J., 603, 721, 1153
 Crane, S. C., 387
Crangon (= *Alpheus*), 166
Crangon crangon, 775, 847
 vulgaris, 139, 494, 777, 1156
Crania anomala, 1114
 Cranwell, L. M., 549, 551
Craspedacusta, 148, 898
 sowerbyi, 897
Crasatellites melinus, 355
Crassostrea, 1129, 1144
 angulata, 1129, 1132
 laperousi, 1133
 gigas, 938, 980
 virginica, 135, 168, 169, 172, 174, 350, 420, 423, 503, 724,
 938, 946, 1129, 1130, 1131, 1133
 Crawford, G. I., 898, 1153
 Crawshaw, L. R., 928
 Crayfishes, origin in Caspian, 897
 Creaser, C. W., 1203
Crenaster semispinosus, 654
 spinolosus, 654
Crenilabrus, 843
Crepidula, 419, 1115, 1144, 1189
 fornicata, 1145
 Crevice faunas, 1020
 Crickard, R. G., 231
 Crickmay, G. W., 276
 Crinoid galls, 408
 Crinoids, 667, 1183
 Crisp, D. J., 370, 376, 378, 483, 1021, 1158, 1175
 Crist, Raymond E., 1049
 Critical levels, 541
Crocodylus acutus, 1213
 cataphractus, 1214
 niloticus, 1214
 porosus, 1214, 1215
 rhombifer, 1213
 Crofts, D. R., 266
 Cromwell, T., 226, 227
 Cross, Joy Barnes, 953, 985
 Cross bedding, 733
 Crossland, C., 258, 1092
 Crowell, S. A., 393
 Crozet Islands, 327
 Crozier, W. J., 280, 1194
 Crustacea, 423, 1151
 burrowers (fig.), 722
 carbonate deposition by, 263
 vertical migration, 454
 Crustose algae, 615
Cryptobia grobbeni, 418
Cryptochirus, 408
 Cryptofauna, 1018
 Cryptomonadina, 418
Cryptomonas, 121, 448
Cryptomya californica, 396, 1149
Cryptonemiales, 261
Cryptophialus minutus, 426
 Crystal structure of carbonates, 250
 Ctenophora, 420, 1108
Cucullanus cirratus, 422
Cucumaria, 405, 1124
 glacialis, 1194
 Cuénot, L., 1144, 1184
Culcita, 622, 404
Culeolus, 653
Culex bahamensis, 1179
 elevator, 1182
 opisthopus, 1182
 salinarius, 1179
Culicoides, 1177
 furens, 1180
 phlebotomus, 1180
Cultellus pellucidus, 494, 495, 497, 500
 Cumaceans, 1154
 Cumings, E. R., 285
Cummingia tellinoides, 497
Cumopsis goodsir, 1154
Cunina proboscidea, 420
 Cupp, Easter E., 1060
 Currents, Black Sea (fig.), 816
 Caspian Sea, 891; (fig.), 893
 in estuaries, 682
 longshore, 677
 and mortality, 960
 surface, 90
 and sponges, 1084
 surface, 97
 tidal, 100
 Currie, R., 298, 955, 956, 959, 962, 983, 984
 Cushing, D. H., 39, 454
 Cushions, of algae, 846
 Cushman, Joseph A., 1076
Cuspidaria, 653, 660, 1149
 Cusps, 590-591
 Cussans, Margaret, 1155
 Cuvier's hypothesis, 941, 961
Cyanea, 403
 capillata, 352
 Cyanophyceae in Baltic, 792
Cyathura carinata, 781, 782
 Cycles, in sea, 917
Cycloclypeus carpenteri, 1077
 guembelianus, 1077
Cyclograpsus punctatus, 1153
 Cyclomyaria, 1201
Cyclonassa brisinae, 841
 Cyclones, 1022
 Cyclopoida, 425
Cyclops, 794
Cyclopterus lumpus, 979
Cycloseris, 615, 624
 Cyclostomes, 1203, 1204
Cyclothone, 1207
Cyclothrichium meunieri, 957, 980, 982
Cyema, 643
 Cylindrical sampler, 65
Cymbalopora bulloides, 1077
 tobagoensis, 1076

- Cymodocea*, 623, 724
manatorum, 1052
Cymopolia, 261
Cymothoa, 426
Cymothoidae, 426
Cynoscion arenarius, 709
nothus, 709
Cyphastrea, 618, 624, 1093
Cypraea, 622
Cypridina castanea, 1162
Cyprideis littoralis, 781, 914, 915
Cyprina, 477
islandica, 484, 495, 498
Cyprinodon fasciatus, 862
variegatus, 143, 716
Cyprinus, 867, 868
carpio, 853
Cyprindontes-Palaemonetes community, 721
Cyrena coxanus, 728
Cytellaria, 1070
Cytheridae, 1162
Cystobia irregularis, 418
Cystophora, 541, 542
Cystoseira, 846, 1048
barbata, 839
Cytherella africana, 1162
Cytheromorpha fuscata, 781
Cytherura gibba, 781
Cyttarocelis ehrenbergi, 833
helix, 833
Dabelow, A., 1219
Dahl Erik, 24, 514, 521, 596, 599, 602, 690, 702, 763, 764, 1154
Dahl, Frederick, 6, 9, 11
Dahl, Knut, 986
Daily rhythm, 918, 921
Dakar mortality, 983
zonation, 1020
Dakin, W. J., 320, 498, 982, 1012, 1017, 1175
Dalamatella, 261
Dales, R. Phillips, 391, 497, 601
Dall, W. H., 1113
Daly, R. A., 240, 629
Dalyellia viridis, 429, 430
Damboviceanu, A., 269
Dammerman, Karel W., 974
Damour, A., 273
Damsel fish, 403
Dana, J. D., 10, 360, 1093
DANA, 203, 219, 221, 223, 225, 226, 320, 330
D'Ancona, Umberto, 1023
Danil'chenko, P. T., 820, 821, 822, 823
Danish Biological Station, 6, 7
Danish West Indies, coastal flora, 1052
Dannevig, Alf, 947, 978
le Danois, E., 208, 651, 653, 1093
Dansereau, P., 359, 721, 727, 728
Dantan, J. L., 1124
Danube mortality, 983
sediments, 828
Danzig (see Gdansk)
Daontesia mielchei, 656
Daphnia, 794
Dapples, E. C., 734
Dardanus asper, 401
deformis, 401
Dark bottle and C¹⁴ methods, 193
Darteville, E., 1191
Darwin, C., 10, 277, 629, 957, 1093, 1211, 1213
Darwin's hypothesis, 629
Dassow, J., 78
Dasybranchus caducus, 494
Dasycladaceae, 261
Datsko, V. G., 826, 871, 872
Davenport, C. B., 164, 599, 1144
Davenport, Demorest, 395, 405, 406, 407
David, H. M., 1043
David, Lore Rose, 970
Davidson, T., 1113
Davidson, V., 309
Davidson, V. M., 1162
Davidson Current, 315
Davies, J. L., 1224
Davies, P. A., 376
Davis, B. M., 5
Davis, C. A., 1053
Davis, C. C., 449, 953, 984
Davis, F. M., 63, 64, 68, 477, 484, 485, 487, 497, 503, 509
Davis, H. C., 169, 473, 479
Davis, J. H., 718, 727, 728, 1053
Davis Strait, 222
Davison, Charles, 976, 977
Davy de Virville, A., 571
Dawes, Ben, 421
Dawson, C. E., 1131, 1154
Dawson, E. Y., 262, 370, 1044
Dawson, J. W., 989
Dawydoff, C., 1197
Day, J. H., 680, 694, 700, 713, 1023
Deacon, G. E. R., 217, 223, 224, 325, 330, 338
Dead Sea, bacteria, 1037
mortality, 977
salinity, 129
Dean, Bashford, 1130, 1139, 1203
Dean, Laura M. I., 1107
Death, cold, 165
heat, 163, 164
spawning, 960
Deboutteville, (see Delamare Debutteville, C.)
Debyser, J., 281, 733
Decapod crustaceans, 426, 1152
Deckert, Kurt, 651, 1207
Decomposition in Black Sea, 824
of experimental cultures, 309
of nutrients, 302
Deecke, W., 970, 971
Deem, A. W., 958
Deep scattering layer, 454
Deep Sea, 641-672
animals, adaptations of, 666-667
illustrations of, 642, 655, 662, 665
benthos, 369, 651-667
bacteria, 503
communities, 46, 651-667
deposits, Black Sea, 829
eels, 663
fishes, 1207
fauna, origin of, 667-669
productivity, 501
sedimentation, 282, 645
zonation (fig.), 642
Deep water corals, 1095
Deerns, W. M., 958
Deevey, E. S., 42, 43, 44, 492, 497, 1053, 1107
Deevey, G. B., 1165

- Defant, A., 447, 810, 814, 960
 Defandre, G., 1073
 Defretin, R., 1123
 Degoutin, M., 978
 Dehnel, Paul A., 1144
 Deichmann, Elisabeth, 1187, 1193, 1194
Deima, 652
Deinocerites, 1177, 1179
 Delamare Deboutteville, C., 79, 393, 596, 1044, 1152, 1175
 1176
Delesseria, 125, 841
 Delf, C., 494
 Dell, R. K., 74, 512, 513
 Dellow, V., 536, 549, 551, 554, 557, 567, 1044
Delphinus delphis, 868, 1225
 Delsman, H. C., 982
 Deltas, 729
 Demel, K., 780
 Demir, M., 820, 833, 841
 Demoll, B., 490
 Demond, J., 447, 452, 1167
 Demospongea, 1083
Dendraster, 595
excetricus, 636, 1191
Dendritina-Alveolinella facies, 1078
 Dendrochirota, 1194
Dendrodoa grossularia, 1199
Dendrogaster astericola, 426
Dendronotus frondosus, 497
Dendrophyllia, 1093, 1096, 1100
cornigera, 1093
ramea, 1095
 Dendy, Arthur, 1085
 Dendy, Jack S., 1024
 Denison, M., 573
 Denison, W., 946, 980, 985
 Denitrifying bacteria, 260
 Denmark mortality, 978
 Density, Black Sea (fig.), 809
 Density gradient, Black Sea (fig.), 812
Dentalium attenuatum, 355
facies, 1093
Dentex vulgaris, 949, 978
Deplanthera wrightii, 1052
 Depth, of bottom invertebrates, 503
 in Black Sea, 843, 845
 Deraniyagala, P. E. P., 986, 1217
 Derjugin, K. M., 20, 505, 508, 513, 514, 515, 516, 520
Dermochelys coriacea, 1217
Dermocystidium, 416
Derocheilocaris remanei, 1176
Deronectes cerisyi, 853
Desis crosslandi, 1175
Desidiopsis racovitzai, 1175
Desmarestia, 263
ligulata, 1048
 Desmomyaria, 1201
Desulphyllum cristagalli, 636, 1095
 Desmoscoleoidea, 422
 Destructive forces on reefs, 613
Desulfovibrio, 820, 895
aestuarii, 820, 855
 Detling, L. E., 535
 Detritus, 6, 383
 Devil's Stream, 818
 Devila, F., 55
 Devillers, C., 505, 515, 518
 Dexter, Ralph W., 45, 53, 718, 935, 1017, 1053, 1145, 1179
 Deyrolle, Theophile, 977
Diadumene luciae, 938
Diamysis bahirensis, 708
pengoi, 708
 Dianova, E., 1039
Diaptomus salinus, 914
Diastylis rathkei, 495
 Diatomaceous shales, 970
 ooze, 449
 Diatoms, 120, 443, 449, 1059-69
 decomposition, 306
 fouling, 1027
 grazing, 106
 littoral, 1060
 photosynthesis of, 121
 resting spores, 170
 tests, 310
 Diactophymoidea, 423
 Dice, Lee R., 29
Dictiosphaerium, 901
Dictyocha, 1073
Dictyosiphon, 788
chordaria, 1045
foeniculaceus, 788, 1045
Dictyosphaeria, 619, 623
Dictyota, 841, 853, 1046
dichotoma, 1017
 Dictyotaceae, 261
Dicyema typus, 419
 Dicyemida, 419
Didacna, 803
baeri crassa, 804
crassa, 804
pontocaspia, 804
pseudocaspia, 804
tschudaee, 804
Didemnum viridae, 429
 Diener, C., 20
 Dietrich, G., 202, 203, 208, 759, 951, 964
 Dietz, Robert S., 964, 965, 966
 Dieuzeide, R., 23, 1017
 Diez del Valle, Juan Blanco, 983
 Digby, P. S. B., 1165
 Digenea, 421
Dikerogammarus haemobaphes, 863
villosus, 865
 Dimon, A. C., 497
 Dinoflagellates, 120, 123, 418, 444, 448, 935
 migration, 123
 mortality, 979
Dinophilus, 1126
Dinophysis, 792, 831
sacculus, 851
Diodon hystrix, 986
 Diogenes, 847
pugilator, 846
varians, 846
Diomedea chlororhynchos, 1221
Diopatra neapolitana, 494
ornata, 1047
 Diphyllidea, 421
Diplocystis aeruginosa, 1049
Diploglossus hancocki, 1214
millipunctatus, 1214
Diplosoma, 624, 1199
listerianum, 1199

- Discinisca*, 1114, 1115
 lamellosa, 1113
 summigii, 1113
 Discontinuous distribution (fig.), 372, 375
Discorbis, 264, 1078
Discosoma, 618
 DISCOVERY, 219, 224, 225
 DISCOVERY Committee, 324
 Disintegration of calcareous skeletons, 275
Disoma multisetosum, 1126
 Disphotic, 23
 Dispersal of estuarine organisms, 697
 of larvae, 452
 Dissolved oxygen, determinations, 231
 Dissolved salts (tables of),
 Aral Sea, 131, 914
 Baltic Sea, 130
 Bear River (Utah), 130
 Black Sea, 131
 Caspian Sea, 131, 914
 Dead Sea, 130
 fresh waters, 130
 Great Salt Lake, 130
 Jordan River, 130
 Kara Bugaz Gulf, 914
 Mediterranean, 131
 ocean, 130
Distephanus speculum, 1073
Distichlidetum, 1054
Distichlis, 726
 spicata, 727, 1054
Distichopora, 615
Distomus, 1019
 Distribution, in estuaries (fig.), 701, 702, 703
 limits in Baltic, 775
 longitudinal, 563
 and salinity, 149
 Dittmar, H., 73
 Dittmar, William, 185, 186, 187
Ditrupa subulata community, 519
Ditylum brightwelli, 1063
 Diurnal migration, 453
 Caspian Sea, 902
 Diurnal tides, 550
Divaricella divaricata, 846
 Divergence, 299, 447
 Diving helmet, 55
 Diving spheres, 54
 Dixon, A. Y., 1154
 Djakonov, A., 1188
 Djevinski Liman, 851
Dodecaceria, 1030
 fewkesi, 1122
 Döderlein, Ludwig, 1184
 Dogger Bank, patchiness, 484
 nutrients, 315
 Dohrn, Anton, 4
 Doldrums, 91
 Dole, Malcolm, 209
 Doliolida, 1201
Doliolum denticulatum, 833
 Dolomite, 239
 Dolomitization, 274
 Dominance, 474
 Domogalla, B. P., 305
 Domantay, J. S., 1194, 1195
Donacilla, 599, 846
Donax, 419, 596, 597, 803
 fluctuations, 937
 fossor, 600
 gouldi, 393, 395, 600; facing 394
 migration, 600
 movements (fig.), 600
 and parasitism, 415
 semigranosus, 599
 variabilis, 171
 vittatus, 395
 Dons, Carl, 1093, 1123, 1188, 1194
Doridoedes gardineri, 432
 Dorn, Paul, 971
Doropygus pulex, 425
Dorosoma cepedianum, 152
 Dorsey, N. Ernest, 190
 Dorylaimoidea, 422
Dosidicus gigas, 960, 981
Dosinia, 803
 discus, 1147
 Doss, B., 732
 Dosse, Gustav, 1085
 Dotterweich, H., 266
 Doty, M. S., 29, 535, 539, 549, 550, 551, 552, 558, 559, 561,
 562, 565, 569, 572, 612, 622, 707, 1024, 1041, 1043, 1044,
 1093
 Double tide, 551
 Doudoroff, P., 167, 947
 Dove, W. H., 1030
 Dovey estuary, 1023
 Downing, A. L., 186
 Doyle, M. M., 430, 431, 438
 Doyle, W. L., 430, 431, 438
 Drach, P., 3, 55, 74, 269, 635, 638
Dracunculoidea, 422
 Draggendorff, O., 728
 Dragonfly nymphs, 148, 1182
 Drake Passage, 216
 Draper, J. W., 503
 Dredge, CHALLENGER (fig.), 74
 criticized by Forbes (fig.), 6
 epibenthic, 75
 Dredges, 73-74
 Dredging, 1
Dreissena(=*Dreissensia*), 696, 803, 857, 899, 915
 -*Monodacna*-unionid variation, 861
 polymorpha, 786, 806, 807, 863, 897, 898, 914, 1145
 and *Monodacna colorata* community, 857
 pontocaspica, 806, 807
 rostriformis, 806, 807
 Drensky, P., 865
Drepanocladus, 789
 Drevermann, Fritz, 966, 967
 Drew, G. H., 257, 260, 285, 1037
 Drew, K. M., 261
 Drewite, 257, 285
Dromia vulgaris, 399
 Dry organic matter, percentage, 493
 Dry weights, 492
 Dry: wet weight ratios, 493
 Dry Tortugas, sponges, 1085
 Dryden, Lincoln, 1093
 DuBois, H. M., 1113
 Dubovsky, N., 1162
 Dudich, E., 250, 269
 Duerden, J. E., 264, 279, 400, 1030
 Duffey, E. A. G., 1221

- Dufour, J., 982
 Dugal, L. P., 267, 281
 Den Dulk, A., Jr., 1163
 Dumas, D., 452
 Dumas, F., 55
Dunaliella, 140, 572, 712
 Dunbar, C. O., 131
 Duncker, Georg, 974, 989
 Dunn, E. R., 1215
 Dunn, Mary D., 1044
 Durchon, M., 494
 Durham, J. Wyatt, 379, 380, 1093
 Du Rietz, G. E., 18, 542, 543, 546, 547, 548, 549, 550, 552, 767, 1044, 1048
Durvillae antarctica, 1048
 Dutch East Indies, oxygen, 228
 Dutch wadden sea, 721
 Dutton, H., J., 121
 Duval, M., 269
 van Dyke, E. C., 1181
 Dymond, J. R., 1206
 Dynamic computations, Black Sea, 814
Dytaster spinosus, 654
Dytilium brightwelli, 855
Dysidea crawshayi, 352, 353
etheria, 352, 353
Dysponelus pyamaeus, 1121
 Eales, N. B., 497, 1012
 Earland, Arthur, 1077
 Earthquakes and mortality, 945
 East Africa, Corals, 1103
 East Greenland Current, 338
 East Indies, copepods, 1168
 deep water, 229
 East London mortality, 979
 Easter Island, temperatures, 1092
 Eastman, C. R., 968
 Ebbecke, U., 646, 647
 Ebling, F. J., 1016
Echeneis, 427
 remora, 404; (fig.), 405
Echinaster, 622
Echiniscoides sigismundi, 1175
Echinobothrium tybus, 421
Echinocardium, 472, 595
 cordatum, 477, 495, 497, 1192
 flavescens, 1192
Echinocephalus, 422
Echinocyamus pusillus, 424, 494, 805, 1192
 Echinodermata, 427
 carbonate deposition by, 264-265
 distribution, 1189
 of Öresund, 1188
 pigments, 1189
 Echinoids, 1190, 1191
Echinometra, 280, 618, 624
 mathaei, 1191
Echinophyllia, 615
 zone, 619, 624
Echinopora, 622, 1097
Echinorhynchus salmonis, 783
Echinostigma paradoxa, facing 651
 Echinostomatidae, 421
Echinostrephus, 280
Echinothrix turca, 407
Echinus esculentus, 493, 494, 495, 498, 1192
 norvegicus, 1192
 Echiurida, 423, 1120
Echiurus echiurus, 1120
 Eckart, Carl, 54
 Eckernford mortality, 986
Ecklonia, 1017
 Ecological equivalents, of corals, 628
 gradients, 176-179
 twins, 704
 Ecology, applied, 3
 concepts, 29
 course in, 5
 dynamic, 11
 estuarine, 11
 Economy of reefs, 1100
 Ecosystem, 30; (defined), 32-33
 Ecotones, 42
 Ecotype, 700
Ectocarpus, 841
 confervoides, 782, 1042
 duchassaingianus, 1042
 siliculosus, 1042
 Ectocrine substances, 46, 409, 484
 Ectoprocta, 423
 Eddy system, Black Sea, 814
 Eddy diffusion, 300
 Edge effect, 42
 Edgerton, H. E., 650
 Edmonds, C. H., 542, 547, 549, 550, 551, 552, 553
 Edmonds, S. J., 1017
 Edmondson, C. H., 142, 555, 1030, 1093, 1094, 1152
 Edwards, D. J., 503
 Edwards, F. E., 1139
 Edwards, F. W., 1179
 Edwards, G., 668
 Edwards, Vinal N., 982
Edwardsia, 623
 Eelgrass, 168
 Eelgrass Disease, 7, 417, 1021, 1039
 Eels, deep-sea, 663
 Efficiency, 35
 of *Littorina*, 387
 of mussels, 386
 Egler, Frank E., 725, 727, 1053, 1055
 Eggs, fresh water vs. marine, 147
 Egorova, A. A., 820
Egregia, 551, 562
 menziesii, 551
 Eguchi, M., 1090, 1093
 Egypt, oysters, 1133
 Ehrenbaum, E., 139, 151, 1014
 Ehrenberg, C. G., 1073, 1094
 Ehrenberg, Kurt, 969
Eimeria clupearum, 418
 gadi, 418
 sardinae, 418
 Eimeridia, 418
 Einarsson, H., 468, 471, 495, 505, 509, 512
Eisentia arborea, 635
 Eisig, H., 1123
 Eklund, C. R., 1219
 Ekman, S., 20, 21, 63, 65, 67, 69, 70, 71, 74, 101, 146, 149, 177, 178, 360, 361, 364, 368, 373, 377, 445, 451, 468, 649, 651, 663, 664, 703, 753, 763, 765, 774, 784, 900, 1012, 1189, 1194
 Ekman grab, 67, 70
 Ekman-Lenz Grab, 67
Elachista fucicola, 788

- Elaphe quadrivittata deckerti*, 1213
 Elasmobranchs, 143
 Elazari-Volcani, B., 1037
 Elbe estuary, 703, 1023
Electra angulata, 1028
 Elements of Physical Biology, 34
 El Hadd, 956
 Eliason, Anders, 653, 1123
 Elittoral, 19
 Elkhorn Slough (Calif.), 1025
 Elliott, F. E., 97, 101
 Ellis, David, 957
 Ellis, W. G., 135
 Ellison, S. P., 17
Ellobiophrya donacis, 395
 Ellson, J. G., 78
 Elmhirst, R., 269, 498, 557, 558, 567, 1013
Elminius modestus, 376, 378, 379, 698, 898, 1158
 El Niño, 163, 953
 mortality, 979
 Elofson, Olof, 1162
Elpidia, 659, 661
 glacialis, 664
 sundaensis, 654, 658
 solomonensis, 658
 hermadecensis, 659
Elphidium, 1075, 1079
 crispum, 1078
 Elsey, G. R., 1029
 Elssner, E., 266
 Elton, C., 34, 40, 149, 466, 468, 474, 475, 476, 477, 484, 485, 488, 1013
 Eltonian pyramid, 34
 Ely, Charles A., 1189, 1211
Elymus arenarius, 1057
Emerita, 452, 593, 594, 596, 599
 analoga, 597, 601
 Emerson, Alfred E., 34, 1012
 Emerson, Robert, 124
 Emery, K. O., 56, 69, 258, 260, 261, 262, 263, 264, 271, 273, 275, 276, 277, 278, 279, 285, 573, 574, 576, 588, 590, 673, 688, 689, 729, 730, 964, 965, 966, 1097
 Emigration from the sea, 147
 Emiliani, C., 246, 282, 283, 284, 379, 668
 Emmel, Victor, 186, 187
Emoia atrocostatum, 1213, 1214
 nigra, 1214
Emplectonema gracilis, 846
Encrinus, 667
 Endemics, Baltic, 785
 Caspian, 897, 899
Endeodes, 1178
 Enders, H. E., 397
Endocladia viridis, 1048
Endocrypta huntsmani, 394
 Endogenous senescence, 497, 499
Endopachys, 1096
Endosphaera engelmanni, 419
 Enequist, Paul, 70, 71, 786, 1154
 Enequist sampler, 70
 Energy, computation of in sea, 1064
 cycles (fig.), 33
 flow, 34
 incident (fig.), 119, 120
 Engelmann, T. W., 124, 125
 Engle, J. B., 946, 960, 987, 1125, 1145
 English Channel, nutrients, 311
Engraulis, 866, 867, 868
 encrasicolus, 908
 mordax mordax, 709
 nanus, 709
Enhalsus acoroides, 1046
Enhydrys bennetti, 1215
 Eniwetok reef, Odum version, 39
 Ennis, C. C., 226, 330
Enochrus bicolor, 776, 853
 melanocephalus, 780
 nebulosus, 1182
 Enoploidea, 422
Ensis, 1146
 ensis, 805
Entamoeba coli, 413
 histolytica, 413
Entelurus aequoreus, 942, 988-989
Enterocola fulgens, 425
Enteromorpha, 560, 707, 788, 841, 845, 848, 853, 857, 1017
 association, 1047
 flexuosa, 1042
 intestinalis, 573, 839
 linza-Spirulina subsalsa, community, 1046
 marginata, 573
 plumosa, 1042
 prolifera, 1044
Enteromorpha compressa, 1046
Entodesma saxicola, 1149
Entocolax ludwigi, 424
Entoconcha mirabilis, 424
Entophysalis, 279, 549
 granulosa, 1042, 1044
 Entoprocta, 395, 423
 Entorhipidiidae, 419
Entorhipidium echini, 419
Entosphenus tridentatus, 1203
Entovalva perrieri, 397
 sempri, 397; (fig.), 398
 Environment, of estuary (fig.), 695
 Environmental constancy of estuaries, 695
 factors, 684
 restriction of estuaries, 695
 Environments, classified (fig.), 18, 22
 Eoacanthocephala, 422
 Eocene Paleogeography (fig.), 379
 Eolianite, 285
Ephinoë serrata, 860
Ephydalia fluviatilis, 429, 780, 790
Ephydra, 711, 853
 macellaria, 853
 millbrae, 1180
 Epi, (prefix), 21
 Epibathyal, 27
 Epibenthic dredge, 75; (fig.), 77
 Epibioses, Gullmarfjord, 469
 Epicaridea, 426
 Epifauna, 461; (figs.), 462, 464
 in Arctic, 461
 in tropics, 463
 Epilittoral, 21
 Epipelagic (defined), 21; 641
Epitonium pachypleura, 355
Eponidella, 1076
Eponides, 1079
 Epstein, S., 268, 275
 Equilibrium, 34
 Ercegovič, A., 553

- Eremicaster*, 658
pacificus, 653, 658, 662
 Ericson, D. B., 633, 1077
 Erikson, H., 186
 Eriksson, E., 249
Eriocheir sinensis, 698, 786, 898
Eriphia spinifrons, 845
Eristalis, 853
Erosa erosa, 394
 Erosion at Bikini, 277
 Errantia, 423
Ervilia, 803
 Eryonidae, 663, 667
Erythrodiplax berenice, 148, 1182
 Esaki, T., 1179
 Escher, B. G., 945
Esox lucius, 795
 Essenberg, Christine E., 1201
 Essig, E. L., 1054
 Esterly, C. O., 1154
 Estuaries, 42, 673-749, 1022-27
 Australian, 11, 680
 borders 718
 classification, 680, 683
 faunal components of, 694
 North America, 11
 physiography, 673
 sequence, 676
 study of, 10
 South Africa, 11, 1023-24
 species in, 703
 types, 682
 Estuarine (term), 23
 deposits, 734
 environment (fig.), 695
 facies, 700
 fauna, origin, 698
 organisms (distribution) (fig.), 706
 Estuary (defined), 673
 streamlines (fig.), 679
 zonation (fig.), 674
 Étangs, 1026
Eteone arctica, 680
Ethmodiscus, 1062
rex, 1067
Ethusa, 653
Eucalanus bungii bungii, 1165
 Eucestoda, 421
Euchaeta norvegica, 1168
 Euclliata, 419
Eucopia australis, 643
grimaldi, 643
Eucypris reptans, 1163
Eudesme, 788
Eudorella, 495
 Eugeobiontic zone, 546
Eugorgia rubens, 636
Eugregarina, 418
Eugymnanthea inquilina, 393
ostrearum, 393
polimantii, 393
Eugyra adriatica, 845, 847
 Euhydrobiontic zone, 546
Eulalia, 846
 Eulittoral, 19
Eumendon convictor, 497
Eumenia crassa, 495
Eunemertes gracilis (see also *Eplectonema gracilis*), 846
Eunice fucata, 497, 929-932
gigantea, 494
harassi, 1124
siciliensis, 494
viridis, 171, 924, 926
Eupagurus, 401, 1156
bernhardus, 392, 399, 401, 403, 494
constans, 392
excavatus, 392, 401, 402
gracilipes, 392
prideauxi, 402
pubescens, 393
Eupharynx, 643
Euphausia superba, 310, 1224
 Euphausiacea, 1153
Euphronides, 652
kerhevei, 653
verrucosa, 659
Euphyllia glabrescens, 1096
Euplana takewakii, 420
Eupleura, 1144
caudata, 1147
Euplotes, 711, 733
Eupoterion pernix, 419
 Euryalidae, 1187
 Eurybathy, 663
Eurychilum actinae, 419
Eurycope galathea, 660
madseni, 660
nodifrons, 660
 Euryhalinity, 696
Eurytemora affinis, 708, 781
hirundo, 792
hirundoides, 708, 781, 792, 793
lacinnulata, 149
Eustrongylides, 423
Euzonus arcticus, 1121
Evadne nordmanni, 792, 793, 794, 833
spinifera, 833
trigona, 856, 901
 Evans, Francis C.; 33
 Evans, L. T., 725, 727
 Evans, R. G., 162, 163, 564, 1017, 1145, 1149
 Evaporation, oceanic, 91, 92, 93, 98
Evasterias troschelii, 405
 Everglades, 946
 Evermann, B. W., 1224
Esermannichthys, 427
 Evolution and plankton, 455
 Ewing, M., 46, 56, 69, 633
 Exchange in Black Sea, 820
 in Bosphorus, 819
 of carbon dioxide, 242
 Excretion, 298
 Excretory organs, 138
Exosphaeroma, 1156
 Expeditions, 6
 Experimental fertilization, 11
 Experimental colonization of Caspian Sea, 909-912
 Exposure time and zonation, 558
 External metabolites, 46, 409, 484
 Extinction coefficient (defined), 114; 109, 115
Exuviella cordata, 831, 855, 901
 Eyring, C. F., 454
 Faber, Friedrich, 960, 987
Fabricia, 899, 908

- Fabriciola*, 848
 Fabricius, Otto, 960
 Facies, 707
 Factors, of communities, 471
 limiting, estuary (fig.), 694
 Faganelli, A., 1023
 Fage, Louis, 215, 647, 651, 664, 922, 951, 1123, 1162, 1175
 Fahey, E. M., 559, 561, 562, 569, 577
 Fairbridge, R. W., 239, 240, 257, 258, 262, 274, 277, 278, 281, 283, 285, 379, 1094
 Fairy shrimps, 696
 Falke, Horst, 941, 959, 962, 969, 981
 Falkland Ids. polychaetes, 1123
 Falla, R. A., 1219
 Faouzi, Hussein, 729
 Far eastern fishes, 1208
 Faria, Jose Gomes de, 984
 Farmer, Harlow, 680, 683
 Faroe Bank, 316
 Faroe Islands-Iceland Ridge, 221
 Faroe Shetland Channel, 316
 Farran, G. P., 1165
 Fassbinder, K., 269
 Fassett, Harry Clifford, 960, 974, 987
 Fassett, Norman C., 1054
 Fauna, Aral Sea, 914
 Caspian Sea, 895
 components of estuaries (table), 694
 deep sea, 653
 of estuaries, 700
 penetration (fig.), 686
 S. Africa (fig.), 362
 Fauré-Fremiet, E., 593, 596, 1061
 Faurot, L., 401, 402, 1094
 Faustino, L. A., 1094, 1141
 Fauvel, P., 1117, 1123
Favia, 618, 619, 620, 622, 1097
 speciosa, 627
Favites, 618, 619, 620, 622, 1090
Favorinus albus, 432
Fecampia, 420
 Federighi, Henry, 1145
 Feeding adaptations in beaches, 594
 of corals, 1103
 Feinstein, Anita, 956
 Feldmann, J., 9, 537, 542, 551, 552, 553, 573, 958, 1045
 Feltham, C. B., 305, 690, 710, 732, 733, 1040
 Fenton, C. L., 1114
 Ferguson, F. F., 1017
 Ferris, G. F., 1179
 Ferronnière, G., 11, 560, 712
 Fertilization, experimental, 303
Festuca rubra, 1054, 1056, 1057
 Fewkes, J. W., 393, 394, 1030
 Feyling-Hanssen, Rolf W., 1158
Fibulia nollilangere, 1085
 Fick's law, 134
Ficopomatus macrodon, 1024
 Fiddler crabs, 147, 721, 1155, 1156, 1157
 Field, Neil C., 916
 Field, R. M., 258, 285
Fierasfer, 404, 427
 Fiji, corals, 1094
 Filarioidea, 423
 Filice, Francis P., 1024
 Filters, 79
 Filter feeders, efficiency, 36
 Finckh, A. E., 280, 1094
 Finch, R. H., 165, 979
 Finland, Gulf of, 753
 nutrients, 320
 salinity fluctuations, 760
 Fischer, E., 1024
 Fischer, B., 1037
 Fischer, P., 1114
 Fischer, P. H., 1130, 1145
 Fischer-Piette, E., 9, 537, 1124, 1149
 Fish, C. J., 173, 982
 Fish Commission, 5
 Fish tagging, 6
 Fisher, James, 1220
 Fisher, Walter K., 396, 1107, 1117, 1120, 1189, 1194, 1220
 Fisheries, Black Sea, 865-868
 Caspian Sea, 904
 investigations, 4, 11, 77
 records, 938
 Sea of Azov, 865-868
 populations, 1210
 Fishes, 1205
 and anemones, 403
 Aral Sea, 915
 in Baltic, 794
 in canyon, 637
 Caspian Sea, 903, 904
 deep sea, 653
 euryhaline, 146
 inquiline, 1206
 microflora, 1037
 and salinity (fig.), 152
 salt tolerance, 698
 Sarmatian, 862-863
 Sea of Azov, 867
 and sponges, 1206
 in sulfur, 712
 temperature modifications, 175
 Fisk, H. N., 729
 Fitch, C. P., 951, 953, 958
 Fitch, J. E., 592
 Fjords, 688
 tides in, 100
 Flabellifera, 426
Flabellum rubrum, 1090
 Flagg, F., 167
 Flagg, W., 186
 Flattely, F. W., 568, 1013
 Fleming, C. A., 512, 513, 514, 1220
 Fleming, J. A., 191, 226, 330
 Fleming, R. H., 87, 90, 97, 100, 102, 103, 187, 192, 194, 195, 204, 215, 251, 257, 447, 1015, 1061
 Flora, Aral Sea, 914
 Black Sea, 840
 Caspian Sea, 895
 estuaries, 707
 Florentin, R., 712
 Florida, corals, 1101, 1102
 inland waters, 1025
 keys, intertidal, 1021
 mortality, 978, 984
 oysters, 1131, 1132
 red tides, 946
 reefs, 1090

- Florida Current-Gulf Stream System, 220
 Straits of 220
- Florideae, 261
- Flounders, 1208
- Fluctuations of populations (fig.), 481
- Fluctuations, of year classes, 936
- Flux equilibrium 34
- Fogg, G. E., 1013
- Fol, H., 109
- Folliculinids, 395, 1069
- Fontaine, M., 646
- Fontinalis*, 789
dolectorica, 779
- Food chain, 36, 298
 deep sea, 650
 herring (fig.), 37
 ilyophagous fishes (fig.), 692
 of *Ocypode*, facing 587
 sand fauna (fig.), 597
- Food, in deep sea, 649
- Food of reef-corals, 1091
- Foraminifera, 282, 450, 1075-81
 calcification, 263
- Foraminifera communities, 515; (fig.), 516
 living, recognition, 1081
 marshes, 727
 zooxanthellae in, 431
- Forbes, C., 980
- Forbes, Edward, 1, 2, 5, 7, 8, 9, 11, 17, 20, 359, 360, 370, 542
- Forchhammer, G., 273, 946, 977
- Ford, E., 488, 497, 509, 512
- Fordia leucobalia*, 1214
- Forel, F. A., 109
- Formica rufibarbis*, 846
- Forsman, B., 751, 780, 782, 787, 1151, 1154
- Forster, G. R., 55, 74, 635
- Fortnightly rhythm, 919
- Fosberg, F. R., 1054
- Foster, J. F., 588
- Fossil floras, 10
 fuels, 244
 waters, 208
- Fossilization of crabs, 1157
- Fouling communities, 43
- Fouling organisms, 9, 1027-28
- Fowler, J. B., 1188
- Fox, C. J. J., 186, 187
- Fox, D. L., 12, 79, 267, 268, 383, 384, 385, 386, 387, 456, 592, 593, 963, 1027, 1125, 1189,
- Fox, H. M., 167, 168, 713, 1191
- Föyn, B., 305
- Francis, E. T. B., 1203
- Francis, George, 958
- Francis-Boeuf, C., 690, 731
- Franck, J., 121, 124, 125
- Franckiewicz, J., 1050
- Fraser, J. H., 1024
- Franz, H., 474
- Fraser, C., 487, 498
- Fraser, C. M., 393, 394, 922
- Fraser, J. H., 59, 449, 453
- Fraser River, 691, 693
- Freeman, J. A., 266
- Freezing-point depression, 134, 139, 140
- Freimann, S. J., 1224
- Freymy, P., 958
- Frenguelli, Joaquin, 1061
- Freshwater element, Baltic, 779-780, 1026
- Fresh-water fishes, 143
 fauna in Caspian, 895
- Fresh water samplers, 67
- Fretter, Vera, 349, 350, 408
- Frey, David G., 1130
- von Freyberg, B., 946, 977
- Freyella mortenseni*, 658
sexradiata, 654
tuberculata, 653
- Friedlander, B., 924, 925, 926
- Friedmann, Herbert, 1219
- Friedrich, H., 47, 1119, 1124
- Friesian Islands, 721
- Fringing reef, 624-625; facing 627
- Fritsch, F. E., 261, 262, 263, 429, 431, 432, 566
- Fritillaria borealis*, 792
- Fritz, Sigmund, 113
- Frogs, 1211
- Fröhlicher, Hugo, 942, 971, 989, 1013
- Fryer, J. C. F., 281
- Fuchs, C. W. C., 974, 986
- Fucoid zone, 369, 542
- Fucoxanthin, 121, 124
- Fucus*, 550, 721, 1027
 fauna, 790
furcatus, 556
 microfauna, (fig.), 41
serratus, 124, 348, 369, 779, 788, 1043, 1045, 1046, 1047
spiralis, 564, 1043, 1045
vesiculosus, 369, 564, 767, 774, 783, 788, 790, 1043, 1045, 1046, 1047
- Fulda, Ernst, 977, 978
- Fuller, J. L., 206
- Fulmar, 1220
- Funafuti, 1094
- Fundulus*, 144, 167, 423, 425
parvipinnis, 153
- Fundy, Bay of, 681, 703
 mortality, 982
 nutrient cycle, 300
- Fungi, marine, 1036, 1039, 1040, 1051
- Fungia*, 438, 615, 618, 619, 622
actiniformis, 1089, 1090, 1097
danai, (fig.), 438
fungites, facing 626
repanda, 1096
- Furcellaria fastigiata*, 788
- Furneston, J., 983
- Fusejima, R., 1077
- Gaarder, K. R., 444, 453, 953
- Gaarder, T., 79, 186, 192, 219, 446, 685
- Gadaut Bank, 1132
- Gadus aeglefinus*, 757
brosme, 987
callarias, 979
morrhua, 161, 422, 794
mustela, 987
polaris, 969, 988
- Gage, S. H., 1204
- Gail, F. W., 110, 689
- Gaimard, Paul, 989
- Galaine, C., 1124
- Galadyiev, M. A., 869, 871
- Galapagos, corals, 1092
 temperatures, 1091
- Galathea*, 1156

- GALATHEA, 11, 64, 446, 650, 653, 652, 654, 663, 664, 665, 666, 955, 959
- Galatheanithemum*, (fig.), 652
- profundale*, 656
- hadale*, 656
- Galatheaithauma*, facing 651
- Galatheathuria*, 643
- Galaxaura*, 261
- Galaxea*, 618, 1096
- aspera*, 1090
- Galeolaria*, 1017
- caespitosa*, 1017
- Gall, M. H. W., 109
- Gall crabs, 407
- Gallichthys*, 409
- Galligar, G. C., 1052
- Gallihier, G., 263
- Gallionella reticulosa*, 1036
- tortuosa*, 1036
- Galloway, J. C., 979
- Galloway, T. W., 928
- Galstoft, P. S., 102, 267, 268, 941, 951, 957, 981, 982, 984, 1013, 1017, 1085, 1191
- Galveston Bay, oysters, 1130
- Gamble, F. W., 430, 433, 436, 438
- Gammaracanthus lacustris*, 771
- Gammarus*, 136, 490, 795, 1155
- duebeni*, 680, 781, 782
- locusta*, 138, 494, 708, 713, 777, 853, 854
- pulex*, 138, 708
- saddachi*, 704
- oceanicus*, 708, 760, 775, 777, 778, 782, 790
- salinus*, 760, 775, 781, 790
- saddachi*, 708, 760, 775, 781, 790
- Ganong, W. F., 1054
- Ganges, 11
- Ganges delta, 1024, 1025, 1211
- Garbarini, P., 922
- Gardiner, A. C., 205, 298
- Gardiner, J. S., 279, 280, 281, 622, 1094
- Garstang, W., 595, 1062, 1154
- Garth, John S., 364
- Gasterosteus aculeatus gymmurus*, 145
- trachurus*, 145
- Gasterosiphon deimatis*, 424
- Gastrodes*, 420
- Gastropoda, 424
- Gastropods, in Baltic, 779
- Gastrosaccus dissimilis*, 708
- johnsoni*, 708
- mexicana*, 708
- sanctus*, 843
- Gastrotrichs, 422, 1118
- Gauld, D. T., 11, 1166, 1168
- Gause, G. F., 41, 42
- Gause's hypothesis, 41
- Gaviidae, 1219
- Gavrilescu, N. 818
- Gayevskaya, N. S., (ed.), 1033
- Gdańsk, algae, 1046, 1050
- Gecarcinidae, 1156
- Gecarcinus*, 602
- Gee, H., 257
- Gehenio, P. M., 165
- Gehringer, J. H., 60
- Geikie, Archibald, 946, 980
- Gelidium pusillum*, 1046
- Gemeinhardt, Konrad, 1073
- Geminate species and salinity, 704; (table), 708-709
- Gemmill, J. F., 1189
- Geomphibiontic zone, 18, 546
- Geobiontic zone, 546
- Geodia mesotriaena*, 636
- George, P. C., 953, 957, 958, 985
- Geography, Black Sea, 801
- Geomorphology of Baltic, 768
- Georges Bank, 300
- zooplankton, 1168
- GENERAL GREEN, 209, 222
- Geotria australis*, 1204
- Gerardia*, 1215
- Gerasimov, I. P., 803
- Gerlach, Sebastian Adam., 1118
- Gersbacher, W. M., 573
- Gerris thoracicus*, 780
- Geryon iridens*, 654
- Geryonia*, 420
- Gessner, F., 766, 767, 794, 971, 1013
- Gex, M., 265
- Ghost crab, 602
- Gibb, Dorothy C., 1045
- Gibbard, J., 982
- Gibbons, N. E., 1037
- Gibbons, S. G., 56, 59, 69
- Gibbula albida*, 805
- cineraria*, 494
- Gibraltar, Straits of, 221
- Gibson, R. E., 252
- Gibson-Hill, C. A., 1220
- Gigantocypris mülleri*, 1162
- Gigantura*, 653
- Gigartina*, 349, 552, 635, 1048
- canaliculata*, 551
- corymbifera*, 552
- spinosa*, 552
- volans*, 552
- Giglioli, Henry H., 977, 988
- Gignoux, M., 1191
- Giguere, P. A., 231
- Gilbert, C. H., 1130
- Gilbert, Grove Karl, 680
- Gilbert, J. Y., 956, 970, 981, 1062
- Gilbert, O., 41
- Gilchrist, J. D. F., 946, 951, 979, 980, 983, 984
- Gillespie, T. H., 1220
- Gillner, V., 727, 1054
- Gills, crabs, 138
- Gilson, H. C., 205, 207, 1018
- Ginsburg-Karagicheva, T. L., 1037
- Ginsburg, R. N., 257, 258, 279, 280, 285
- Giorgio, B., 1206
- Gislén, T., 1, 9, 19, 20, 55, 369, 469, 470, 493, 494, 505, 537, 541, 542, 550, 551, 552, 558, 563, 565, 571, 573, 603, 638, 653, 729, 976, 1013, 1018, 1120, 1183, 1184
- Gizzard-shad, 152
- Glacial history, Black Sea, 804
- relicts 785
- in Baltic, 782
- stages in Black Sea, 805
- stages and sedimentation, 284
- and surface temperatures, 284
- Glaessner, M. F., 1135
- Glaser, O. C., 489

- Glasnerova, E., 261
 Glauconite sands, 971
Glaux maritima, 1057
 Glazier, W. C. W., 984
 Glennan, A. H., 984
Glenodinium, 831, 955
 fiaceum, 983
 trochoideum, 984
Globicephala, 1224
 Globigerina ooze, 263, 645,
 Globigerinidae, 450
Globorotalia truncatulinoides, 1077
 Glochidia, 424
 Glock, Waldo S., 1045
Gloeocapsa dimidiata, 1049
 membranina, 1049
Glomus, 655, 659
Glottidia, 1114
 Glover, R. S., 60, 61
 Glueckauf, E. 186
Glycera, 846, 847, 1125
 robusta, 395
 siphonostoma, 494
Glycinde, 1126
 Glynne-Williams, J., 638, 1018
Gmelina pusilla, 864
 Gnamamuthu, C. P., 1152
 Gnathodbellida, 423
 Gnathiidea, 426
Gnathophausia gigas, 643
 ingens, 643
 Gneri, F. S., 691, 692
Gnorimosphaeroma oregonensis lutea, 708
 oregonensis, 708
 Gobiesocidae, 1192
Gobius fluviatilis, 862, 864
 melanostomus, 862, 863, 864
 minusius, 646
 platyrostris, 862
 Godfrey, F. L., 1139
 GODTHAAB, 219, 222
 Godwin-Austen, Robert, 2, 359
 Van Goethem, Charles, 955, 959
 Goetsch, W., 430
 Goetz filter, 79
 Gohar, H. A. F., 404, 431, 432, 433, 438, 1106
 Goldberg, E. D., 257, 267, 345, 346, 349, 351, 383, 384, 1198
 Golenchenko, A. P., 869
Gomontia, 279, 622
 Gompel, M., 921
Goniaster, 652
Goniastrea, 618, 620, 628, 1090
 aspera, 1096, 1097, 1099
 pectinata, 627
Goniolithon, 615
Goniopora, 622, 624, 628
 Gönner, O., 258
Gonospora minchini, 418
Gonyaulax, 449, 831, 985
 catanella, 1062
 polyedra, 122, 123, 831, 851, 855, 981, 983
tamarensis, 982, 983
 tricantha, 855
 Goodchild, J. G., 1095
 Goodhart, C. B., 1154
 Goodwin, T. W., 963
 Gordan, Joan, 1155
 Gordiacea, 423
 Gordioidea, 423
Gorgonia flabellum, 1105
 Gorgonians, 1105
 in canyons, 636
 Goreau, T. F., 264
Gorgonocephalus, 423
 Gortner, R. A., 951, 953, 958
 Gosline, W. A., 974
 Gosse, E., 3
 Gosse, P. H., 3, 392, 395, 399
 Gotland Sea, 753
 Gould, H. A., 69
 Gould, H. R., 730
Gouldia minima, 846, 847
 Gowanloch, J. Nelson, 1149
 Grabs (fig.), 62
 Grabau, A. W., 20
Gracilaria, 707
 confervoides, 707, 721, 1047
 von Graff, L., 1119
Graffilla 420
 gamellipara, 420
 Graffin, A. L., 144
 Graham, A., 408, 432
 Graham, Herbert W., 212, 226, 330, 333, 444, 452, 956, 981
 Graham, M., 11, 315, 316, 1206
 Graham-Smith, G. S., 175
 Grahmann, R., 804, 806
 Grain sizes in estuaries, 729
 Gran, H. H., 79, 169, 171, 192, 300, 446, 447, 1062, 1073
 Le Grand, Yves., 109
 Grand Banks, 198
Grandierella bonnieroides, 716
 Granqvist, G., 765
 Grant, C. W., 385
 Grant, U. S. IV, 1114
 de Grassé, P., 1069
 Grave, B. H., 497, 928, 1159
 Grave, Caswell, 724, 1130, 1189, 1198
 Gravier, C., 612, 926, 1095, 1124
 Gray, Ellen, H., 1151, 1155
 Gray, James, 1013
 Gray, R. W., 1225
 Grayce, R. L., 1220
 Grazing, by copepods, 1166
 of diatoms, 1061
 Great Belt, 752
 Great Barrier reef (*see also* Low Isles), 1096, 1098, 1100,
 1103; facing 627
 Great Barrier Reef Expedition, 10
 Great Pond, Foraminifera, 1080
 Great Salt Lake, bacteria, 1039
 Grebes, 1221
 Greeley, A. W., 1095
 Green J., 424
 Green glands, 138
 Green muds, 970
 Greenberg, D. M., 257
 Greenfield, Leonard J., 1030
 Greenland mortality, 979
 polychaetes, 1127
 Greenwald, I., 266
 Greenshields, F., 1225
 Gregarinida, 418
 Gregariousness problem, 483

- Griegl, J. V., 351
 Griffin, L. E., 1139
 Griffiths, F. P., 1037
Grimaldichthys, 653
 Grimpe, G., 1179
 Gripenberg, S., 254, 766
 Groebbels, Franz, 1220
 Groningen, Geologisch Institut, 722
 Grøntvedt, Jul., 444, 453, 953
 Grosev, G., 865
 Gross, Fabius, 11, 1206
 Gross, A. O., 1220
 Grove, Brandon H., 145
 Grover, R. S., 453
 Growth, in Arctic, 498
 of ahermatypic corals, 1089
 of corals, 1088
 Growth form, of corals, 1088
 Growth increment, (defined), 499
 Growth rates, various seas, 499
 in Arctic, 498
 bottom animals, 495-497
 of reef corals, 1101
 Growth temperatures, mollusks (fig.), 268
 Grubb, V. M., 557
Grubea clavata, 845
 Grunion, 595, 918, 919; facing 919
 Grutterink, J. A., 963
 Gruvel, J., 1095
Gryphaea (see *Crassostrea*)
 Guam mortality, 976
 Guanabara, Bay of, 956, 1025
 mortality, 984
 Guano birds, 1220
 Guano deposits, 11
 Guberlet, J. E., 212
 Gudger, E. W., 165, 394, 395, 949, 978, 979, 1189, 1206
 Guérin-Ganivet, J., 1213
 Gueydon, A., 818
 Guilcher, A., 277
 Guiler, E. R., 44, 541, 547, 549, 557, 564, 1018
 Guillemand, F. H. H., 974
 Guillemots, 1221
 Guinea, Gulf of, polychaetes, 1123
 Gulf Coast (U. S. A.), 946
 Gulf of Mexico, (see Mexico, Gulf of)
 Gulf Stream, oxygen, 197
 Gulf Stream System, 198
 Gulfweed, 445
 Gullmarfjord, epibioses, 9, 469
Gunda (see *Procerodes*), 136
 Gunnerus, J. E., 960
 Gunter, G., 11, 29, 73, 129, 139, 140, 141, 145, 147, 148, 149,
 151, 152, 165, 166, 169, 171, 172, 173, 175, 416, 449,
 590, 696, 702, 709, 721, 729, 935, 941, 945, 946, 949,
 953, 964, 968, 977, 978, 984, 985, 987, 1024, 1130, 1205,
 1207
 Günther, A. C. L. G., 175, 977, 1207
 Günther, E. R., 163, 226, 298, 335, 447, 981
 Günther, K., 47, 651, 1207
 Günther, R. T., 977
 Guppy, H. B., 1095
 Gurney, R., 700
 Guryanova, E., 505, 555, 560, 567-568, 680, 685, 720, 947,
 1155
 Gustafson, G., 74, 509, 947, 1155, 1204
 Gutsell, James, S., 1145
Gymnodinium, 431, 449, 956, 984, 1096
 brevis, 351, 953
 sanguineum, 982
 splendens, 980
Gymnogongrus norvegicus, 1048
 Gymnostomata, 419
 Gyral, current, 97
 Gyrocotylidea, 421
 Gytija, 962
 H/V ratio, 119
 Haarløv, N., 23
 Haas, F., 261, 266, 1145
 Habe, T., 504, 514, 515, 680, 688, 689, 731
 Habitat selection, 1022
 Hackett, L. W., 1179
 Hada, Y., 264, 1077, 1095, 1101
 Hadal, 21, 27; (defined), 645
 animals (fig.), 662
 community, 654-661
 fauna, 654, 666; table, 656-661
 zone, 369
Hadalanthus knudseni, 656
Hadalothuria wolffi, 658
 Haeckel, E., 4, 19, 609, 1070, 1073
 Haecker, V., 1070
Haemocerca danae, 425
Haemovinia multica, 781
 pubipennis, 781
 Haferkorn, H. E., 587
 Haffner, R. E., 369
 Hagerup, O., 1220
 Hagfishes, 143, 1203, 1204
 Hagg, W., 522
 Hagmeier, A., 63, 64, 66, 67, 484, 505, 508, 509, 510, 516,
 523, 1014
 Halacaridae, 424, 1175, 1176
Halacarus verrilli, 424
Halammohydra community, 791
Halarachne, 424
Halechiniscus guileli, 424
Halichoerus grypus, 1224
Halichondria, 352, 846, 1019
 Haliclina, in pools, 573
Halicryphus, 785
 spinulosus, 774, 783, 789, 1120
Halicystis, 140
Halimeda, 261, 262, 272, 276, 552, 615, 618, 622, 624, 1046
 opuntia, 1049
Haliotis, 280, 424, 426, 1029
Haliplus flavicollis, 780
 immaculatus, 780, 781
 obliquus, 780
Halisiphonia galatheae, 656
Halitholus cirratus, 783, 792
 Hall, J., 1114
Halla parthenopeia, 494, 1125
 Haller, B., 1139
Halliella, 853
 caspensis, 853
 taurica, 854
 Halme, E., 766, 767
 Halmos, Dorothy, 1117
Halobates, 148, 1178, 1182
 hawaiiensis, 1181
 mariannarum, 1181
 micans, 1178, 1181
 sericeus, 1178, 1181, 1182

- Halocynthia aurantium*, 394
igaboja, 394
Halodule wrightii, 1181
Halomitra, 622
Halophila, 552, 623, 1178, 1179
 Halophytes, 726, 727, 1058
Halosaida lateralis, 1178
Halosphaera, 444
Halosydna brevisetosa, 407
Halovelia, 1178, 1179
 marianarum, 1181
 maritima, 1179
 Hamano, S., 164
 Hamilton, J. H., 1225
 Hamm, R. E., 187, 230
 Hanavan, Mitchell G., 1207
 Hancock, D. A., 1183
 Hand, C., 40, 392, 393, 1175
 Hanley, S., 17, 20
 Hann, C. S., 1203
 Hanna, G. Dallas, 1073
 Hansen, B., 664, 665
 Hansen, Paul M., 949, 960, 979
 Hanskov, B., 665
Hantschia amphioxys, 1061
 Häntzschel, W., 732, 734
 Hanzawa, Shoshiro, 1062, 1077
Haplobothrium, 421
Haplobranchus ballticus, 780
Haplocarcinus marsupialis, 407
Haploops community (fig.), 517
 tubicola, 476
 community, 516
Haplophragmoides-Haplophragium facies, 1078
Haplosporidia, 418
Haplosporidium chitonis, 418
 nemertis, 418
Haplozoon clymenellae, 418
 Hara, T., 1189
 Harant, Hervé, 1198
 Hardenberg, J. D. F., 957, 982
 Hardin, G., 121, 537
 Hardy, A. C., 1, 11, 60, 61, 449, 453, 480, 958, 1013, 1166
 Hardy, Eric, 1211
 Hardy plankton recorder (fig.), 58
Harengula, 866, 868
 Harmer, S. F., 1110, 1117
Harmothoe, 792
 imbricata, 789
 coeliaca, 399
 sarsi, 777, 783, 1125
 Harms, J. W., 728
 Harpacticoida, 425
 Harper, E. L., 230
 Harris, John E., 1013
 Harrison, A. D., 1023, 1024
 Hart, T. J., 298, 955, 957, 983, 984, 1155
 Hartman, Olga, 46, 63, 69, 1117
 Hartmeyer, Robert, 1198
 den Hartog, C., 378, 1158
 Hartt, C. F., 1095
 Harvey, Ethel Browne, 1192
 Harvey, H. W., 36, 38-39, 192, 247, 262, 297, 303, 305, 311,
 314, 315, 338, 446, 1063
 Hase, A., 1179
 Hashimoto, Yoshiro, 981
 Hasle, G. R., 123
 Hastings, Anna B., 1110
 Hatai, K., 1114, 1115
 Hatai, S., 1095
 Hatanaka, M., 1194
 Hathaway, E. S., 727, 729
 Hatt, Robert T., 1225
 Haswell, W. A., 1071
 Haubrich, R., 646
 Hauenschield, C., 929
 Haug, Emile, 966
 Hausding, B., 501
 Haurwitz, B., 112, 684
 Havinga, B., 139, 151, 497, 505
 Hawaii, corals, 1102
 insects, 1182
 mortality, 974
 reefs, 1094
 Hawaiian Islands, 335
 Hawley, J. W., 1139
 Haxo, Francis T., 122, 124, 125, 963
 Hayasaki, I., 604, 978
 Hayashi, K., 264
 Hayes, F. N., 243
 Hayes, F. R., 302, 1149, 1150
 Hayes, H. L., 449, 951, 952, 985, 989
 Häyryén, E., 751, 767, 768, 788, 957
 Heat exchange, 93
 transport, 97
 Heath, H., 394
 Hecht, F., 281, 688
 Hecht, Günther, 1213
 Hecht, Selig, 1198
 Hedgpeth, J. W., 17, 25, 29, 53, 359, 364, 373, 376, 400, 401,
 461, 508, 545, 563, 565, 567, 568, 577, 587, 600, 602,
 687, 693, 695, 697, 712, 713, 716, 718, 721, 729, 775,
 891, 946, 949, 977, 978, 985, 1015, 1018, 1130, 1143, 1175
 Hediger, Heini, 1213
 Heding, G. S., 1194
 Hedley, C., 1095
 Hedling, Svend, 664
Hedophyllum, 551
 sessile, 551
 Heegaard, P. E., 1152, 1207
 Heezen, B. C., 46, 633
 Hegner, R. W., 176
 Heilbrunn, L. V., 160, 164, 165, 1013
 Heiden, Heinrich, 1063
 Heilprin, A., 716, 1096
 Heincke, F., 175
 Heldt, Jeanne H., 957, 986
 Helfer, Hermann, 425, 1176
Heliactis bellis, 432
 Heliophiles, 125
Heliopora, 264, 272, 615, 622, 628, 1094
 coerulea, 619
 zone, 619; facing 621
 Helland-Hansen, B., 110, 119, 201, 204, 231, 300, 452
 Hellefjord mortality, 986
 Helmcke, J. G., 1114
Hemectyon hyle, 636
Hemigrapsus nudus, 1155
 oregonensis, 1155
 Hemmingsen, A. M., 73
 Henderson, G. J. D., 449
 Henderson, Jean T., 1145
 Hendey, N. Ingram, 1027, 1063, 1067
 Hendrickson, John R., 392

- Hendrix, W. C., 226
 Henkel, I., 571
 Henning, Willi, 1179
 Hensen, V., 4, 5, 56
 Henson, Bennette E., 784
 Hentschel, E., 298, 447, 1085
Hepatus, 399
 chilensis, 400
 epheliicus, 400
 Herbivores, symbiosis in, 430
 Herbst, C., 265
 Herdman, W. A., 7, 8
Hermatobates haddonii, 1179
 Hermatypic Corals, 1087
Hermella alveolata, 1124
Hermione hystrix, 494
 Heron Island, facing 627
 Heron Id., Foraminifera, 1077
 Heron-Allen, E., 263
 Herpobdellida, 423
Herpolitha, 619, 622
 Herre, A. W. C. T., 143, 1207, 1214
 Herring, Jon L., 1180
 Herring, food of, 36, 1166; (fig.), 37
 Herrings, Caspian, 904
 Herrington, W. C., 11
 Hersey, J. B., 213, 454
 Herter, K., 1124
 Hertlein, L. G., 1114
 Hertling, Helmuth, 1013
 Hertwig, R., 1074
 Hérubel, M. A., 1120
Hesperonoe adventor, 396
 Hess, E., 1037
 Hesse, Paul, 1214
 Hesse, R., 19, 20, 148, 177, 463, 465, 466, 611, 728, 1013
 Hesselberg, T., 814
 Hessland, I., 786, 787
 Hesse, C., 496, 505, 516, 758, 766, 767, 774, 777, 790, 794
Heteranomia, 419
Heterenchelys microphthalmus, 667
Heterocapsa triquetra, 983
Heterocentrotus, 615; facing 620
 mammilatus, 1191, 1192
Heterocineta, 395
Heterocope, 856
 caspia, 856
Heterocyathus, 1098
Heteropsammia, 1098
 cochlea, 1091
 Heteroptera, 1181
Heterotanasais oerstedii, 781, 782
Heteropanope tridentatus, 787
Heteroxenia, 433
 Van Heurck, Henri, 1064
 Heuts, J. M., 63, 145
 Hewatt, W. G., 43, 44, 53, 536, 541, 550, 551, 552, 556, 557, 564, 569, 1143
 Hewitt, C. G., 1156
Hexagrammus otalii, 978
Hexamita, 418
 salmonis, 418
 Heydemann, F., 1179
 Heyerdahl, Thor, 230
 Hiatt, R. W., 1155
Hiatella, 1030
 artica, 1030
 gallicana, 1030
Hiatrochota, 1085
 Hickock, J. F., 405
 Hickson, S. J., 1096, 1106
 Hidaka, Koji, 90
 Hidalgo, J. W., 1139
 Higgins, Elmer, 978
 High latitudes, reproduction in, 170
 Highs, polar, 90
 subtropical, 90
 High-speed samplers, 60
 Hildebrand, H. H., 78, 949, 978, 1018
 Hildebrand, S. F., 165, 166, 1207
 Hilditch, T. P., 164
 Hill, C. L., 1030
 Hill, Leonard, 1225
 Hill, T. G., 261
 Hills, E. S., 278
 Hiltermann, H., 23, 702, 734
Himantalia lorea, 564
 Hinde, H. P., 1054
 Hindman, J. C., 205, 251, 687
Hinnites multirugosus, 636, 1149
 Hinrichs, J., 509
 Hinton, M. A. C., 1225
Hippasteria phrygiana, 494
Hippocampus, 843, 853
Hippolyte varians, 846
Hippopus, 432, 622, 623, 624, 628
 maculatus, facing 621
 Hirabayashi, K., 265
 Hirasaka, Kyosuke, 981, 1225
 Hiro, Fugio, (*later*, Utinomi, Huzio), 408, 1090
 Hirasaki, Yishitsugu, 1028
 Hirschmann, N., 791, 1162
 Hirudinea, 423, 1124
 Hishida, K., 730, 731
 History of Black Sea, 802; (figs.), 802, 805, 806
Histrio histrio, 368
Histriophoca groenlandica, 1224
 Hjort, Johan, 6, 19, 63, 67, 110, 119, 174, 1014
 Hjort-Ruud bottom sampler, 71
 Hobart, J., 41, 638, 1018, 1175
 Höber, R., (ed.), 135
 Hock, C. W., 1037, 1172
 Hock, R. J., 186
 Hoek, P. P. C., 724
 Hof, T., 1037
 Höfer, H., 980, 985
 van't Hoff, T. H., 159
 Hoffman, C., 786
 Hoffmann, Friedrich, 974
 Hoffmann, H., 1145, 1148
 Hoffmeister, J. E., 576, 618, 1096, 1101
 Hofker, J., 1077
 Högbom, A. G., 273
 Höglund, Hans, 1077
 Hollaender, A., 305
 Holland, oysters, 1131
 Holly, M., 1204
 Holm, Esther Aberdeen, 1069
 Holme, N. A., 63, 65, 67, 68, 69, 72, 493, 1145
 Holme sampler, 65
 Holme suction corer, 72
 Holmes, R. W., 109
 Holmes, S. J., 34
Holocentrus sanguineus, 987
Holacoconops kerteszi, 1181
Holopus rangii, 667

- Holothuria*, 623, 1195
 surinamensis, 1194
 Holothurians, 1193
 commensals, 397
 deep sea, 652
 Holotricha, 419
 Holthuis, L. B., 709, 787, 1152
 Holzmaden shales, 966, 967, 971
Homarus, 138, 142
 blood, 269
Homotrema rubrum, 264
 Honjo, Kojio, 1167
 Hoover, Grace, 1117
 Hopkins, A. E., 168, 169, 451, 1130
 Hopkins, Hoyt S., 1201
 Hopkins, Sewell H., 413, 1129
 Hopkins Marine Station, 558, 562
 Hopkinson, John, 1198
Hoplochromis coeruleus, 619
 Hoplonemertini, 422
Hoploplana inquilina, 420
 Hora, Sunder Lal, 1024
 Horizontal scattering, 118
Hormathonema, 261
Hormidium flaccidum, 125
Hormosira, 541, 567
 Horne, W. A., 687, 688, 689, 690
 Hornell, James, 957, 985, 986, 1217
 Horseshoe crab, 173, 1171-1173
 Horton, F. M., 1203
 Hotchkiss, M., 309, 1037, 1039, 1040
 Hough, J. L., 730
 Houlbert, C., 1124
 Houot, Georges, 54, 650
Hovasebria, 1073
 Hovasse, 432
 Howes, N. H., 687, 689, 691
 Hoyle, W. E., 1139
 Hubbs, C. L., 175, 176, 378, 409, 709, 712, 1203, 1204, 1208
Hubbsiella sareliana, 920
 Hubendick, B., 779, 1150
 Hudson River, 682
 Hult, Jöran, 1155
 Hultén, E., 785
 Humboldt Current, 447
 Humes, A. G., 1118, 1152
 Humm, H. J., 593, 595, 596, 599, 956, 1042, 1177
 Humphrey, R. R., 575
 Humphreys, W. J., 186
 Humus, in Baltic, 767
 Hunsrück fossils, 967
 Hunsrück shales, 734, 967, 969, 971
 Hunt, O. D., 63, 72, 1194
 Hunt vacuum sampler, 72
 Hunter, J. F., 732
 Hunter, W. R., 1030
 Huntington, Ellsworth, 568
 Huntsman, A. G., 173, 703, 707
 Hurlbut, H. S., 1180
 Hurley, D. E., 44, 1028
Huso huso, 864, 904
 Hustedt, Friedrich, 1064
 Hutchins, L. W., 370, 373, 376
 Hutchinson, G. E., 11, 41, 68, 143, 241, 242, 245, 246, 302, 935, 980, 1180
 Hutchinson, T. J., 980
 Hutton, W. E., 1037
 Huus, Johan, 1198
 Huvé, Pierre, 44, 1028
 Huxley, T. H., 4, 7
Hyalaea trispinosa, 393
Hyalae prevosti, 845
 Hyaline organs of *Tridacna*, 435
Hyalinoecia tubicola, 1127
Hyaloklossia pelseneeri, 418
Hyalonema, 652, 653
 lusitanicum, 654
 Hyalospongea, 1083
 Hyatt, Alpheus, 1085
Hydnophora, 618, 619, 628
 exesa, 622
Hydractinia echinata, 392
 epiconcha, 392
 sodalis, 392
Hydrichthella epigorgia, 392
Hydrichthys boycei, 394
 mirus, 394
 Hydroamphibiontic zone, 18, 546
Hydrobia, 792, 803, 806, 857
 jenkinsi, 786
 ulvae, 476, 497
 ventrosa, 713, 781
 variation, 861
 Hydrobiontic zone, 546
 Hydroclimagraphs, Baltic, 761
 Key West, 25
 Laguna Madre, 716
 Hydrocorals, 1107
 Hydrogen, oxidation, 1040
 Hydrogen sulfide in Black Sea, 193, 809, 811, 812, 815, 820-822
 Caspian Sea, 895
 in fjords, 688
 Kaoe Bay, 229
 and mortality, 959
 in sediments, 733
 Hydrographic climates, 25
 Hydrographic traps, 193
 Hydrography, Black Sea, 808
 Hydroids, 395, 420, 1107
Hydrophis semperi, 1215
Hydrophorus, 1182
Hydroschendyla submarina, 1175
Hydrosoma luculentum, 650
 Hydrostatic apparatus, Radiolaria, 1070
 pressure, 645
 Hydrozoa, 420, 1107
Hyella, 261, 279
 Hygrobatidae, 424
 Hyman, L. H., 420, 421, 422, 423, 1117
Hymenaster blegadi, 658
Hypania, 864, 1121
Hypaniola, 857, 864, 1121
Hyperia galba, 792
 Hypersaline (term), 25
 fauna, origin of, 717
 lagoon (defined), 711
 lagoons, 686, 689, 711
 composition of, 711
Hypocharassus, 1177
Hypomesus olivus, 709
 pretiosus, 709
Hypotrichina, 420
Hypsagonus quadricornis, 394
Iais, 426
 Ice in Baltic, 760, 765

- Ice Chart of the Baltic, 762
 Iceland, 960
 mortality, 982, 987
 Ichthyobdellidae, 423
Ichthyocodium sarcozetis, 393
Ichthyomyzon, 1204
Ichthyophonus, 415
Ichthyosporidium, 415
 giganteum, 419
 hertwigi, 419
 hoferi, 419
Ichthyotomus sanguinarius, 1123
 sanguineus, 423
 Idelson, M. S., 491, 493, 501, 505, 518
Idiacanthus, 643
 Idjen crater mortality, 974
Idotea (or *Idothea*), 795, 846, 848, 849, 1156
 algerica, 833
 ballica, 775, 777, 790, 853
 granulosa, 775, 777, 790
 neglecta, 497
 viridis, 781, 790
 zone, 848
 Iguana, 1213
 Von Ihering, H., 946, 947, 977
 Ihle, J. E. W., 1201
 Ilg, 985
 Ilgaz, O., 808, 817, 819
 Il'in, B. S., 868
 Illing, L. V., 257, 285
 Illumination, 122
Ilyarachna antarctica, 660
Ilyanassa obsoleta, 393
 Ilyophagous fish, 691
 food chain (fig.), 692
Ilyophagus bythincola, 657
 Imamura, Akitune, 976
 Immergentiidae, 423
 Immermann, F., 1071
 Immigrants, Baltic, 785
 Imms, A. D., 1180
 Incident radiation, 113
 India, corals, 1101
 oysters, 1129
 Indian Ocean, deep waters, 214
 nutrients, 327, 330
 oxygen-minimum zone, 223
 Indicator concept, 1065
 Indicators, 60, 453
 of zones, 541
 Indochina, polychaetes, 1124
 Indo-Pacific Acanthometrida, 1071
 Indo-Pacific reefs, 625-627
 Induration, 258
 Infauna, 461-464; (figs.), 463, 464
 conditions for life, 466
 Infection by algae, 432
 Infrabathyal, 27
 Infralittoral, 19, 27
 fringe, 547
 Inge, C. H., 985
 Ingersoll, Ernest, 984
 Ingerson, E., 629
 Ingle, Robert M., 1131
Inia, 1223
 Inlets, tidal, 676
 Inman, D. L., 591
 Inner neritic, 19
 Innominate zone, 615
 Inorganic carbonate solution, 278
 Inorganic sediments, 731
 Inoue, K., 54
 Inoue, N., 650
 Inquiline fishes, 1206
 Inquilinism (defined), 391
 Insects, 148, 1177-82
 in Baltic, 776, 779
 Inshore regions, characteristics of, 99-101
 Inshore waters, nutrients, 311-320
 Insolation (fig.), 112
 Instrument, ideal, 53
 Intercotidale, 18
 Interdependency, in sea, 30
 Interface in Black Sea, 811
 International Council for the Exploration of the Sea, 8
 International Fisheries Exhibition, 7
 Interstitial fauna, 79, 596, 598, 601-602, 791
 Interstitial water, carbon dioxide, 592
 chemical characteristics, 592
 oxygen, 592
 pH, 592
 in sediments, 732
 Intertidal, 18, 19
 crabs, 1153
 ecology, viewpoints, 536
 erosion, 277
 species in estuaries, 700
 zonation, 9, 535-570; (figs.), 538-539
 Introduced species, 938
 Invertebrates, organic content of (table), 494
 Ionic antagonism, 141
 Ionic balance, 140-143
 Ionic products, calcium carbonate (table), 265
 Ionic selection, 136
Istrochota birotulata, 1084
Ipnops, 653
Ipomoea pescaprae, 1052
 Ippen, A. T., 230
 Iranian Gulf, polychaetes, 1127
 Iredale, Tom, 1031, 1140
Iridaea cordata, 374-375
Iridophycus, 1048
 coriaceum, 550
 flaccidum, 550
 Iron, 348
 colloidal, 351
 and diatoms, 1063
 -oxidizing bacteria, 1036
 Iron-titanium ratio, algae, 352
 sponges, 352, 353
 Irvine, R., 250, 1071
 Irving, L., 167, 186, 522
 Irwin, M., 1030
 Isaac, W. E., 542, 550, 560, 1045
 Isaacs, John D., 53, 54, 60, 73, 78, 89, 383, 588, 593, 1027
 Isaacs-Kidd midwater trawl, 78
 Isachenko, B. L., 820, 824, 981, 1037
Isadamsia cancrisocia, 402
Isancistrum loliginis, 421
Ischnomesus bruni, 660
 spärcki, 660
Ischnura ramburii, 1182
 Isefjord, plankton, 1166
 Iselin, C. O'D., 53, 54, 88, 103

- Isham, L. B., 1031
 Ishiwada, Yasufumi, 1077
 Island reptiles, 1214
 Isobenthos, 491
 Iso-community, (defined), 504
 Isohalines, estuary (fig.), 682, 684
 Isopoda, 426, 1153
 Isotope ratios, 244
 aragonite, 257
 Isotopes, in CaCO₃ (fig.), 276
 Issel, R., 988, 1054
Isoachyla parasitica, 1051
Isobactrus, 1176
Istiophorus, 404
 Ito, Koichi, 228
 Ivanov, A. V., 665, 666, 1197
 Ives, J. E., 1172
 Ivlev, V. S., 35
 Iyengar, M. O. P., 261
 Iznik, Lake, 862, 865
 Izuka, A., 922
 Jackson, H. G., 1156
 Jacob, P. K., 985
 Jacobi, A., 1220
 Jacobs, M. H., 160
 Jacobs, W. C., 93, 97
 Jacobsen, J. P., 202, 208, 221, 230, 231
 Jacobsen, V. P., 231
 Jacobson, M. K., 600
 Jacquet, Jean, 726, 727, 1054
 Jade Bay, 690
 Jaeckel, S., 775, 779, 786, 860, 987
Jaera albifrons, 777, 790, 1151, 1154
 marina, 777
 Jägersten, G., 473, 1125, 1197
 Jakhelln, Anton, 222
 James, N. R., 116
 James, Thomas W., 1148
 James River, 686
 Jamieson, J. C., 276
Jania, 618
 Japan and California, (compared), 1018
 Japan, corals, 1093
 crabs, 1157
 marine relicts, 1025
 mortality, 981
 oysters, 1129, 1133
 polychaetes, 1124
 Japan Current, 332
 Japan Sea, oxygen, 228
 Jargon of ecology, 47
 Järnefelt, H., 535, 572
 Järvi, T. H., 774
Jasmineira, 657
 Java Sea, Foraminifera, 1076
 Jefferson, P., 984
 Jenkin, Penelope M., 121, 122, 123, 192, 446, 1064
 Jensen, A. J. C., 757, 792
 Jensen, Ad. S., 949, 979, 1146, 1208
 Jensen, P. B., 6, 69, 489, 490, 491, 492, 497, 498, 499, 510
 Jepps, M. W., 1069, 1077
 Jerlov, N. G., (*before* 1951, Johnson, N. G.), 110, 111, 112, 113, 115, 116, 117, 118, 119, 123, 204, 208, 214, 215, 223, 226, 647
 Jespersen, P., 988, 1166, 1220
 Jetties, zonation on, 564
 Jodrey, L. H., 266, 267, 302, 350, 1133
 Joensuu, Oiva, 273
 Johansen, A. C., 63, 66, 165, 166, 775, 947, 978
 John, D. Dilwyn, 1185
 JOHN MURRAY Expedition, 969
 Johnsen, P., 570, 571, 572
 Johnson, F. H., 1040
 Johnson, D. S., 538, 541, 550, 564, 575, 1055
 Johnson, D. W., 675, 676, 681
 Johnson, M. W., 146, 173, 443, 447, 449, 452, 453, 454, 597, 611, 612, 1015, 1031, 1165, 1166
 Johnson, N. G., (*after* 1951, Jerlov, N. G.), 110, 111, 118, 123
 Johnson, R. A., 1031
 Johnson, S. H., 978
 Johnson, W. H., 537
 Johnsonia, 1143
 Johnston, E. C., 683, 684
 Johnston, J., 250, 255
 Johnstone, J., 4, 6, 8, 177, 1014
 Johsson, Helgi, 1042
 Jones, B. J., 1180
 Jones, E. R., Jr., 1017
 Jones, Meredith, 1175
 Jones, N. S., 43, 65, 469, 471, 485, 504, 509, 510, 512, 1155
 Jones, T. Rupert, 946, 980, 987
 Jordan, D. S., 175, 178, 970, 974, 987, 1208
 Jordan, H. J., 1014
 Jordan Valley, 957
 Jørgensen, C. B., 29, 36, 1199
Jouannetia, 1029
 Joubin, L., 1096
 Journal of the Marine Biological Association, 1143
 Journal de Conchyliologie, 1143
 Journal du Conseil, 1011, 1205
 Juday, C., 305
Juncus, 725, 726
 gerardi, 1055
 maritimus, 1057
 Jungerson, H. F. E., 393, 1106
 Junghuhn, Franz Wilhelm, 974
 Jüngst, H., 987
 Jurva, R., 755, 756
 Just, E. E., 928
 Kaburaki, Tokio, 976
 Kaehne, Kurt, 977
 Kairasuo, I., 786
 Kairies, W., 494
 Kaiser, Erich, 987
 Kalantarian, P., 259
 Kalinenko, V. O., 1038
 Kalle, Kurt, 116, 187, 315, 316, 338, 1014
 Kaltwassersphäre, 641
 Kames Bay, 1026
 sand fauna, 1022
 Kampa, E. M., 301, 481, 611
 Kanda, Chiyoichi, 1045
 Kändler, R., 63, 64, 523, 757, 792, 1208
 Kane, J., 1077
 Kangaroo Id. (Austr.) algae, 1050
 fauna, 1017
 Kanter, Helmuth, 977
 Kaoe Bay, hydrogen sulfide, 229
 oxygen, 229
 Kara Sea, radiolaria, 1070
 Kara Bugaz, 683, 686, 947
 mortality, 977
 Karangat mollusks, 805
 Karangat stage, 805

- Karl, O., 1179
 Karling, T. G., 596, 791
 Karpevich, A. F., 696, 864
 Karsten, George, 1064
 Karstens, W. K. H., 261
 Kathiawar mortality, 985
 Katmai volcano mortality, 974
 Kattegat, 752
 Kawaguti, M., 689
 Kawaguti, S., 431, 432, 436, 437, 1096
 Kazakov, A. V., 965
 Keeble, F., 430, 433, 436, 438
 Keen, J., 956
 Keen, Myra A., 364, 365, 367
 Keijzer, C. J., 1078
 Kellerman, K. F., 260
Kellelia, 636, 637
 Kelley, K. K., 250
Kellia lapeousii, 1149
Kelliella, 659
 Kellogg, J. L., 590
 Kellogg, Remington, 1223, 1225
 Kelvin's laws, 54
 Kemmerer, G., 305
 Kemp, S., 1024, 1157
 Kendall, Henry, 55, 56
 Kenk, R., 1192
 Kent, P., 259
 Kenyon, K. W., 1220
Keratella, 792, 793
 cochlearis recurispina, 780, 786, 793
 cruciformis eichwaldi, 780
 quadrata platei, 780, 785, 793
 Kerguelen, 327
 Kerr, P. F., 259
 Kersten, J. A. H., 121, 122
 Kessel, E., 266
 Kessler, H., 150, 1147
 Kessels, H., 985
Kesun abyssorum, 657
 Ketchum, B. H., 11, 191, 210, 231, 303, 367, 446, 447, 673, 680, 689, 956
 Keulegan, G. H., 589
 Key West hydroclimates, 25
 Keys, A., 306, 309, 313
 Keys, A. B., 144, 153
 Keys, E. H., 12
 Khvalynski Sea, 891
 Kidd, Lewis W., 60, 78
 Kidney, of fish, 144
 origin of, 146
 Kiel Bay, 707
 fauna, 703, 710
 plankton, 1073
 mortality, 986
 Kiel planktologists, 4
 Kiilerich, A., 647
 Killifish, 153
 Kikuchi, Kanzaemon, 1146
 Kimball, Herbert H., 113
 Kincaid, T., 980
 Kindle, E. M., 1055
Kinetocodium danae, 393
 King, C. A. M., 590
 King, E. J., 309
 King, J. E., 78, 447, 452, 868, 1167
 King, W. V., 148
 Kinne, O., 787
 Kinorhyncha, 422, 1118
 Kiralis, Elisabeth Shanesy, 953
 Kirkegaard, J. B., 666
 Kirsop, F. M., 505
 Kitazaki, U., 1077
 Kitching, J. A., 564, 646, 1016, 1018, 1159
 Kittredge, J. S., 385, 963
 Kjellberg, G., 282
 Kjellman, F. R., 19, 20
 Kjennerud, J., 497
 Klassen sampler, 68
 Klauber, L. M., 1214
 Klawak mortality, 987
 Kleinenberg, S. E., 868
 Klie, Walter, 1162
 Klippel, J., 733
 Klugh, A. B., 573
 Klunzinger, C. B., 1097
 Knake, B., 78
 Knebel, G. M., 962
 Knight, J. B., 727, 1055
 Knight, M., 369, 541, 1046
 Knight, Paul, 1152
 Knight-Jones, E. W., 483, 921, 922
 Knipovich, N. M., 131, 808, 810, 811, 815, 854, 855, 856, 869, 977, 983, 1014
Knipowischia, 862
 Knolls, reef, 623
 Knowles, Herbert M., 982
 Knox, G. A., 379, 1019
 Knudsen, M., 23, 63, 65, 67, 110, 221, 231
 Knudsen sampler, 65, 67
 Knudsen's tables, 129
 Knülle, Willi, 1176
 Knysna mortality, 979
 Kobayashi, Sataro, 1199
 Kobayashi, Sumiko, 1028
 Koceviz mortality, 986
 Koch, G., 264
 Koch, H. J., 145, 953
Kochlorine hamata, 426
 Koczy, F. F., 110, 204, 214, 215, 223, 226, 352, 647, 648, 649
 Kodata, H., 1038
 Koehler, R., 1194
 von Koenigswald, Ralph, 967, 971
 Koepcke, H. W., 601, 602, 603
 Koepcke, M., 596, 602, 603
 Kofoid, C. A., 3, 4, 175, 951, 953, 981, 1030
Koinocystis tvaerminnensis, 780
 Kokubo, S., 267
 Kolbe, R. W., 1063
 Kolsováry, G., 1158
 Komai, T., 394
 Komarovsky, B., 953, 957, 958
 KON TRIK, 230, 404
 Koning, A., 730
 Koningsberger, J. C., 1194
 Konoplev, G. I., 838
Kophobolemon macrospinosum, 654
 Kopstein, Felix, 1214
 Koptschenowa, E. W., 969
 Korea, corals, 1093
 Korinek, J., 1038
 Kornás, A., 1046, 1050
 Koror, algae, 1045

- Korringa, P., 11, 45, 349, 724, 917, 922, 926, 946, 951, 980, 1131
- Kosswig, C., 820, 861, 862, 863, 865, 986
- Kosyakina, E. G., 834, 869
- Kotzebue, O., 1091
- Kozloff, E. N., 395
- Krakatoa, 1101, 1102
mortality, 974
- Krämer, A., 925, 926, 1097
- Kramp, P. L., 393
- Krassil'nikov, N. A., 1038
- Kravchenko, A. S., 868
- Kreger, D., 497, 1146
- Krejci-Graf, K., 604, 734, 961, 971
- Krempf, A., 1097
- Kreps, E., 192, 316, 319
- Kriss, A. E., 823, 824, 825, 827, 958, 959, 1038
- Kristensen, Ingvar, 953, 958
- Krogh, A., 9, 12, 71, 135, 159, 160, 190, 306, 792, 1014
- Krogh-Spärck chandelier sampler, 71
- Kromhout, G. A., 138
- Krotov, A. V., 865, 868, 869
- Krumbach, Thilo, 1108
- Krumbein, W. C., 591, 730, 731, 734
- Krusadai Island mortality, 986
- Kudo, R. R., 419
- Kuenen, D. J., 146, 150, 712, 723, 1176
- Kuenen, Ph. H., 20, 215, 245, 277, 278, 282, 283, 633, 645, 1014
- Kühl, W., 1118
- Kühnelt, W., 267, 1031
- Kükenthal, Willy, 1106
- Kullenberg, B., 105, 110
- Kulp, J. L., 195, 196, 259, 263, 355
- Kumerow, E., 1163
- Künne, C., 1014
- Kuntz, Jacob, 110
- Kupferschiefer, 942, 966, 971
- Kurile-Kamchatka trench, 369, 654-655
- Kurisches Haff mortality, 987
- Kuroshio, 228
- Kuroshio, diving chamber, 54
- Kusmorskaya, A. P., 869, 871
- Kuroda, Tokubei, 1140, 1146
- Kuronuma, Katsuzo, 366
- Kusnetzow, S., 977
- Kuznetsov, V. V., 1019, 1046
- Kutscher, Fritz, 967, 969
- Kwanto earthquake mortality, 976
- Kyle Scotnish (loch), 11
- Kylin, H., 551
- Kyrtulthrix*, 261
- L. M. B. C. Memoirs, 1155
- Labidocera brunescens*, 856
- Labrador mortality, 988
- Labrador Sea, oxygen, 222
- Labrostratus*, 1124
- Labyrinthomyxa sauvageai*, 418
- Labyrinthula*, 417
macrocystis, 418
- Lacaze-Duthiers, H., 433, 1097
- Lacazella mediterranea*, 1114
- Lacerta muralis*, 846, 1213
viridis, 846
- Laccobius decorus*, 781
- Lack, David L., 42
- Lacuna divaricata*, 497
- Lacustrine organisms in Baltic, 774, 779
- Laetmonice filicornis*, 654
- Ladd, H. S., 17, 146, 150, 260, 261, 262, 263, 264, 271, 273, 275, 276, 285, 576, 618, 629, 707, 1097, 1101, 1152
- Laddell, W. R. S., 73
- Laevastu, T., 103
- Lafon, M., 494
- Lagenidium entlophytum*, 1051
- Lagenorhynchus*, 1224
- Lagoa dos Patos, 946
mortality, 977
- Lagoon (defined), 673
- Lagoon reefs, 621-624; facing 626
- Lagoon slope, 624
- Lagoonal deposits, 734
- Lagoons, origin of, 277
physiography, 675
sequence, 676
- Laguna Madre (Texas), 686, 711, 712, 713, 716, 731, 946, 947; figs., 687, 714, 716
mortality, 977
productivity of, 716
salinity, 129
- Laguncularia racemosa*, 1053
- Lahille, F., 989
- Lahn, E., 863
- La Jolla Canyon, 633-634; facing 633, 638
- Lakes, bacteria in, 1035
- Lambis*, 622
- Lamellisabella zachsi*, 666
- Laminaria*, 18, 141, 150, 541, 764, 788, 1019, 1046
cloustoni, 566, 1042, 1049
digilata, 369, 560, 1042, 1046, 1048
lejdtsii, 418
saccharina, 566, 799, 1042, 1046, 1049
- Laminarian zone, 18, 542
- Laminations, 733
- Lamont, A., 1114
- Lamouroux, J. V. F., 369, 537, 541, 555, 569
- Lampreys, 1203
- Lamy, Edouard, 424, 1031, 1175
- Land crabs, 147
- Land masses, influences of, 94
- Landward migration, 602
- Långskär, Sweden, algae, 1044
- Lanica conchilega*, 494
- Lanice*, 472
- Lang, K., 67, 377, 1120, 1152
- Lankester, E. R., 8
- Lantern fishes, 643
- Laomedia loveni*, 777, 790
- Lapemis hardwickii*, 1214
- Laphystia*, 1177
- Lar, 396; facing 394
- Larsen, K., 67, 957
- Larsen, M., 497
- Larsson, P., 662
- Larvacea, 1201
- Larvae,
development, 452
dispersal, 30
ecology, 46, 480
response to substrate, 482
settlement, 45, 480, 481, 483
swarms, 481
- Larval stage, of corals, 1088

- Laticauda colubrina*, 1214
laticaudata, 1214
semifasciata, 1214
 Laticaudinae, 1215
 De Latil, Pierre, 55
Latimeria, 667
 Latitudinal discontinuity, 373, 377
 Latitudinal submergences (fig.), 370
 Latitudinal value, 366
Latreutes fucorum, 368
 deLaubenfels, Max W., 1083, 1084
Laurencia, 623
 association, 1047
 obtusata, 839
 Lauzier, L., 231
 Lavalley y Garcia, J. A. de, 981, 1220
 Layering, of nutrients, 337
 Lazier, E. L., 680, 688, 1030
 Leading species (Leitformen), 474
Leander, 908
 adspersus, 494
 fabricii, 777, 790
 squilla, 846
 elegans, 846
Learnea, 1155
 Leatherman, K., 1220
Leathesia, 567
 Lebedev, M. N., 826
 Lebedev, N. V., 865, 869
 Lebedintsev, A. A., 820
 Lecanicephaloidea, 421
 LeCompte, M., 1098
Lecythorhynchus hilgendorfi, 1125
Leda, 803
 pernula, 495
 Von Ledebuhr, Joachim F., 212
 Ledingham, Isabel C., 150
 Lee, A. J., 301
 Lee, R. E., 63, 65, 508, 510, 520
 Lee's grab, 65
 Leeward lagoon reefs, 622
 Leeward reefs, 619-621; facing 621
 Legendre, R., 19, 20, 922, 1123, 1125
 Le Gentil, W., 981
 Lehenbauer, P. H., 176
 Lehmann, W. M., 967, 971
 Lehninger, A. L., 348
 Leim, A. H., 982
 Leitformen, 474
Lemanea fucina, 1050
 Lemche, Henning, 1146
 Lemmermann, E., 1074
 Lemoine, P., 261
 Lemon, J., McW., 938
 von Lengerken, H., 1179, 1180
 Lenz, F., 67
 Leopold, A., 42
 Lepadomorpha, 425
Lepas, 654
Lepeophtheirus, 1155
Leptanthura hendili, 660
Leptasterias, 1188
Leptastrea, 618, 619, 620, 624
Leptocephalus, 650
Leptocera, 1182
Leptocheirus pilosus, 781
Leptoconops, 1177, 1180
Leptocylindrus, 870
 danicus, 830, 855
Leptodora, 794, 856
 Leptopel, 383
Leptoria, 618, 619
Leptoseris, 624
 zone, 615
Leptrotbidium, 1179
Lepralia, 847
Leptrotininnus bottnicus, 780, 793, 856
 Lernaepodoida, 425
 LeRoy, L. W., 1078
 Leschenault de la Tour, J. B. L. C.-T., 974
Lernaenicus radiatus, 425
Lernanthropus pomatomi, 425
Lessoniopsis, 552
 Lethal level, 541
 Lethal temperatures, (table) 162-163
Lethrinus, 978
Leucochlamys, 653
Leucochlamys cryptophthalmus, 654
Leuresthes tenuis, 919; facing 919
 Leutwein, Friedrich, 959
 Levander, K. M., 572, 777, 780
 Level-bottom areas, 466
 Level-bottom environments, 463
 Level, of Caspian, 893-894
 Levick, G. M., 1220
 Levring, T., 123, 1046
 Lewes, G. H., 3
 Lewis, C., 124
 Lewis, H. F., 1220
 Lewis, J. R., 541, 553, 555, 1019
Liagora, 261
 californica, 262
 Libby, W. F., 282
 Lichens, metabolic rates, 167
 Lichomolgidae, 425
Licinophora, 419
 Liebert, F., 958
 Life, origin of, 385
 Life assemblages, idealized, 43
 Life cycles, 496, 497
 Life expectancies (invertebrates), 497
 Life span, actinians, 501
 Light bottle, 79
 Light, abyssal zone, 645
 and corals, 1088, 1099, 1103
 effect on bacteria, 1040
 penetration and zonation, 565
Ligia, 269, 1156
 exotica, 549
 italica, 845
 occidentalis, 549
 oceanica, 1157
 pallasi, 549
 Liljequist, G., 111, 118
 Lillebaelt, 752
 Lilly, Sylvia J., 1016
Lima, 472, 619, 623
 loscombi, 495
Limacina helicoides, 643
 Limans, Black Sea, 849-861
 Rumanian, 853
 Russian, 854
 Limbaugh, C., 405, 633

- Limestone, deposition, 132, 133
weathering, 245
- Limiting factors in an estuary (figs.), 694, 695
- Limfjord, 946
mortality, 977
productivity, 500
- Limnocalanus*, 900
- grimaldii*, 767, 771, 783, 784 (fig.), 792, 793, 794
macrurus, 771, 784
- Limnocardium*, 803
- Limnocnida*, 148
- Limnomysis*, 864
- Limnoria*, 379, 395, 846, 1029, 1030, 1031, 1033
lignorum, 1031, 1033
quadripunctata, 372, 374-375, 376
- Limonium*, 726
carolinianum, 1054
- Limpets, 1149
- Limulus*, 142, 163, 173, 420, 696
blood, 269
moluccanus, 1172
polyphemus, 1171-73
- Linch, G., 257
- Linckia*, 618, 637
- Lindberg, H., 571, 776, 780, 1179, 1177, 1180
- Lindeman, R. L., 35, 36
- Lindemann, E., 951, 983
- Linder, D. H., 1036
- Lindner, M. J., 151
- Lineus bilineatus*, 418
lacteus, 846
- Lindroth, A., 63, 68, 69, 70, 467, 468, 469, 470, 471, 474, 495
- Linguatulida, 424
- Lingula*, 23, 1113, 1114, 1115
lepidula, 1115
- Linke, O., 505, 678, 722, 730, 732, 1146
- Linnaeus, 1152
- Lint, G. M. de, 1163
- Lintoniella adhaerans*, 421
- Liomia medusa-Sabellaria spinulosa* community, 520
- Liopathes*, 1091
- Liothyrella antarctica*, 1114
- Liparocephalus*, 1178, 1179
- Lipman, C. B., 260, 1038
- Lipotes*, 1223
- Lisbon mortality, 976
- Lischke, C. E., 1140
- Lithocystis brachycercus*, 418
- Lithodomus*, 1031
- Lithoglyptes indicus*, 1033
- Lithophaga*, 280, 1029, 1030, 1033
nasuta, 976
- Lithophyllum*, 261, 615
- Lithothamnion ridge, 614
- Lithothamnium* (= *Lithothamnion*), 261, 262, 276, 615, 1017
polymorphum, 778
- Lithotrya*, 615
- Litioipa melanostoma*, 368
- Little Belt, 752
- Litoral, 3
- Littoral, 17; (defined), 19
(and comb. forms), 18
currents, 591
pools, 573
populations, 935
provinces (map), facing 359
zone, 547, 550
- Littorina*, 150, 272, 278, 549, 564, 1149, 1150
aggregation, 1150
efficiency, 387
erosion by, 387
irrorata, 721
littorea, 494, 495, 770, 773, 1150
neritoides, 845
planaxis, 385, 387, 576, 1150
rudis, 554
scutulata, 550, 575, 576, 1150
sichana (or *sikana*), 267, 575
-*Ligia*, variation, 848
- Littorina Sea, 769, 772
- Littorines, 549, 1149
- Living fossils, 667, 1113, 1137, 1146
- Livingstone, D. A., 302
- Lloyd, A. J., 1156
- Lloyd, R., 394
- Lobatostoma*, 421
- Lo Bianco, Salvatore, 974
- Lobophyllia*, 618, 622
- Lobophyton*, 620
- Lobophytum*, 433
- Lobster, European, 168
- Lobster pot, 79
- Loch Long, mortality, 983
- Loch Scottish, 682
- Loch Striven, copepods, 1167
- Lockley, R. M., 1220
- Lodge, Sheila, 1016, 1043
- Loeb, J., 144, 167
- Lohammar, G., 733
- Lohman, Kenneth E., 1059
- Lohmann, H., 4, 61, 424, 449, 960, 989, 1201
- Loligo*, 1143
media, 421
opalescens, 637, 960, 967, 1146
pealei, 967
vulgaris, 1148
- Lolligunculus brevis*, 152
- Longhurst, A. R., 65, 485
- Longitudinal discontinuity, 373
distribution, 563
- Longshore bars, 589
- Longshore currents, 591, 677
- Loomis, W. E., 37, 121, 124, 125, 230
- Loosanoff, V. L. 169, 451, 1125, 1131, 1145, 1189
- Løppenthin, B., 521
- Lophelia*, 1093, 1096, 1100
pertusa, 1093
prolifera, 1093, 1095
- Lophogorgia chilensis*, 636
- Lopholatilus chamaleonticeps*, 979
- Lophotaspis*, 421
- Lord, Russell, 978
- Lorenz, J. R., 3, 17, 542, 552
- Loripes*, 623, 803, 846, 847
- Lortet, L., 972, 977
- Lost Lagoon, 1023
- Lottia gigantea*, 551
- Lotka, A. J., 34
- Lotze, Franz, 977, 978
- Louderback, G. D., 683, 684, 730
- Loukashkin, A. S. 891
- Lovén, P. M., 498
- Lovén, Sven, 1

- Low Isles, 1099, 1101
reef 1098, 1100
- Lowden, G. F. 186
- Lowe, Homer, 1181
- Lowe, P. R., 1220
- Lowenstam, H. A., 257, 261, 262, 263, 264, 266, 267, 268,
270, 272, 273, 277
- Lowman, Shepard, W., 1019
- Lows, subpolar, 90
- Lough Ine (rapids), 1016
- Loxocancha pusilla*, 1163
- Loxorhynchus grandis*, 637
- Loxosoma minuta*, 395
saltans, 423
- Loxosomatidae, 423
- Loxothylacus texanus*, 426
- Løyning, P., 497
- Lübbert, H., 1014
- Lubomirskia*, 900
- Lubyantsev, I. P., 854
- Lucas, C. C., 689, 691
- Lucas, C. E., 46, 409, 449, 484, 1064
- Lucas, Frederic A., 979
- Lucifuga*, 667
- Lucina*, 803
lactea, 425
spinifera, 495
- Lucinoma acutilineata* community, 520
- Lucioperca*, 868
lucioperca, 904
sandra, 853
volgensis, 904
- Lucke, J. B., 675, 731
- Lüders, K., 678, 730, 734
- Ludwig, D., 160, 161
- Ludwig, H., 1189
- Luidia ciliaris*, 497, 1188
- Lumbrineris*, 495
impatiens, 494
- Lumby, J. R., 947, 968, 978, 1147
- Van Lummel, L. A. E., 928
- Lumar periodicity, 918, 921
corals, 1090, 1097
- Lund, E. J., 34, 136, 985
- Lund, S., 779
- Lundbeck, Johannes, 703, 704
- Lundblad, O., 1019
- Luther, A., 765, 766, 791
- Luther, H., 751, 761, 765, 768, 775, 780, 787, 789, 1055
- Luyet, B. J., 165
- Lwoff, A., 395
- Lytle, M. A., 255, 257
- Lybia*, 399
tesselata, 400
- Lycastis longicirris*, 1126
- Lymnaea*, 795
palustris, 779
peregra, 770, 775, 779, 790
stagnalis, 779, 782; facing 782
- Lymnaea Sea, 770
- Lyngbya aestuarii*, 725, 1049
majuscula, 1046
semiplena, 1042
- Ma, Ting Ying H., 264, 1098
- Maas Geesteranus, R. A., 724
- Maas, O., 264
- Macallum, A. B., 142
- Macallum's theory, 142, 143
- Macan, T. T., 1018
- MacBride, E. W., 1194
- MacDonald, J. D., 1140
- MacDougal, D. T., 712
- Macellicephala*, 657
abyssicola, 656
hadalis, 656
mirabilis, 656
zenkevitchi, 656
- Macellicephaloidea grandicirra*, 656
verrucosa, 656
vittazi, 657
- MacFarlane, Constance, 1046
- MacFarlane, John Muirhead, 961, 966, 967, 970
- MacFayden, A., 35, 869
- MacFayden, W. A., 277
- MacGinitie, George E., 9, 12, 63, 74, 396, 456, 466, 467, 469,
471, 483, 497, 501, 505, 518, 599, 601, 603, 935, 1014,
1025, 1189, 1199
- MacGinitie, N., 483, 1014
- Machilis maritima*, 1178
- MacKay, A. H., 1055
- Mackay, D. C. G., 1156, 1192
- Macnae, W., 1023, 1219
- Macoma*, 477, 478, 792, 795
baltica, 476, 477, 494, 495, 497, 774, 775, 777, 783, 789,
793, 978, 1143
community, 505, 722, 789, 790
calcareo, 495, 498, 789
community, 505
communities, 505; (figs.), 506, 507
fluctuations (fig.), 481
incongrua community, 505
nasuta-Macoma secta community, 505
- Macovel, Georges, 979
- Macrobrachium*, 148, 696
distribution (fig.), 697
macrobrachion, 1157
- Macrocystis*, 372, 374-375, 376, 637
beds, 637
pyrifera, 373, 635, 1048
-*Pugettia* fasciation, 1041
-*Nereocystis-Nereis* fasciation, 1041
- Macronesia, 1019
- Macropsis slabberi*, 856
- Macrostylis galathea*, 660
hadalis, 660
sp., 655
- Macrotripylea, 1071
- Macrouridae, 663
- Macronriodes*, 643
- Maetra*, 622, 623, 803
corallina, 805
stultorum, 497
subtruncata, 846
- Macy, R. W., 575
- Madagascar, oysters, 1132
- Madracis*, 615
- Madras mortality, 986
- Madras oysters, 1132
- Madrepora*, 1093, 1096, 1100
oculata, 1093, 1095
- Madsen, F. Jensenius, 369, 652, 653, 663, 1106
- Madsen, H. 461, 947, 1020
- Maandra areolata*, 1103
- Maeda, H., 1208

- Magalhaes, Hulda, 1146
 Mägdefrau, F., 262
Magilus antiquus, 1096
 Magnaghi, G. B., 818
 Magnesium, 348
 in marine shells, 273
 in organisms, 354
 Magnesium/calcite ratios, 273
 Magnesium-calcium ratio, 355
 Magnesium carbonate, 239
 in algae, 261
 in crustacea, 269
 in foraminifera, 264
 in molluscs, 268
 in organisms, 273
 Magnesium geoecology, 240
Maia, 399
 Maine, Gulf of, copepods, 1168
 oxygen, 189
 nutrients, 300, 312
 fishes, 1206
 Maine mortality, 982
 Mainx, Felix, 33
 Makarov, S. O., 808, 818, 819
 Makijama, J., 1098
 Maksimov, N., 865
 Malabar Coast, 946
 Malabar mortality, 985
Malaclemmys centrata, 1213
 pileata, 1213
 macrospilota, 1213
Malacobdella, 422
Malacosteus niger, 643
 Malacostraca, 426
Maldane community (fig.), 515
 sarsi-Ophiura sarsi community, 514
Maldanella harai, 657
 Maldanidae, 495
 Maldive and Laccadive Archipelagoes, 1094
Mallothus villosus, 942, 943, 960, 969, 973, 987
 Mal'm, E., 830, 834
 Malone, Thomas F., 113
 Malyatsky, S. M., 831, 837, 865, 866, 867, 869, 870, 871
 Mammals, 1223
 Man, Isle of, algae, 1045
 ecology, 1021
 isopods, 1155
 Manatees, mortality, 979
Manayunkia, 900
 aestuarina, 780
 Mandra Lagoon, 853
 Mangrove communities (fig.), 728
 crabs, 1157
 facies, 728
 swamps, 281, 624, 728
 zone, 548
 Mangroves, 718, 1054
 age of, 729
 Florida, 1053
 Manigault, P., 266
 Mann, Albert, 1065
 Mann, F. Guillermo, 1208
 Mann, G., 175, 360
 Mannar, Gulf of, mortality, 986
 Manning, W. M., 121, 231
 Mansour, K., 435
 Manton, S. M., 1098
 Manx Shearwater, 1220
 Manyas-Apolyont depression, 805
 Manyas, Lake, 862
 Manzanillo mortality, 976
Maoricolpus roseus community, 514
 Mar Chiquita mortality, 977
 Marchand, J. M., 56, 69, 951, 959, 962, 969, 980
 Marchesoni, V., 1023
 Marcus, Ernesto, 424, 595, 1031, 1110
 Marcus, E. du B.-R., 525
 Margalef, R., 47, 148, 1180
Marginopora, 618; facing 621
Mariguana, 1215
 ogassizii, 1214
 Mariinsky canal system, 897
Marinauris, 280
 Marine Biological Association, 7
 Marine Biological Laboratory, 562
 Marine environments, descriptions of, 102
 organisms in Baltic, 775, 777
 in Caspian, 897
 station, Concarneau, 3
 Marine Research Committee, 447, 1208
 Marini, L., 960
 Marion, M. A.-F., 1098
 Markelov concretions, 972
 Markov, K. K., 803
 Marlier, G., 63, 65, 67
 Marmara, Sea of, 819, 862
 Marmer, H. A., 681, 682
Marphysa gravelyi, 1120
 sanguinea, 494, 1125
 Mars, P., 150
 Marsden, C., 3
 Marsden, William, 989
 Marseille, Gulf of, corals, 1098
 Marsh, crabs, 721
 gas, in sediments, 733
 succession, 726
 vegetation (figs.), 725, 726
 Marshall Islands, atolls, 614
 Marshlands, 724
 Marsipobranchii, 1204
Martesia, 150
 fluminalis, 1029
 funisicola, 1029
 smithii, 424, 1029
 Marshall, E. K., 138, 144
 Marshall, Nelson, 43, 454, 651, 1014
 Marshall, P., 1098
 Von Martens, E., 698
 Martin, Lawrence, 976
 Martin, G. W., 982
 Marston, H. F., 676
 Marshall, S. M., 192, 281, 303, 311, 431, 437, 446, 983, 1013,
 1065, 1098, 1167
 Marubashi, M., 1077
 Marvin, K. T., 956
 Maskell, F. G., 1204
 Masking crabs, 399
 Mass mortality, 448, 935, 941-1010
 and parasitism, 414, 415
 in Baltic, 794
 Mast, H., 1071
 Mast, S. O., 1199
Mastigocoleus, 279
 Mastigophora, 418

- Mastogloia braunii*, 769
 Mastogloia Sea, 769
 Masui, T., 515
 Matawari, Shizuo, 1028
 Matsui, I., 151, 1208
 Matter and energy (fig.), 33
 Matthai, G., 264, 1098
 Matthews, L. Harrison, 1225
 Mattox, N. T., 393, 1131
 Maucha, R., 571, 573
 Mauna Loa mortality, 974
 Maury, M. F., 3
 Mawatari, Sh., 1111
 Maximum density, 131
 Mayeda, T. K., 275
 Mayer, A. G. (after 1918, Mayor, A. G.), 10, 163, 264, 279
 280, 437, 611, 929, 931, 1098-99, 1108, 1172
 Mazarelli, G., 988
 McAtee, W. L., 727
 McBlair, William, 349, 1198
 McCarter, J. A., 302
 McCaughey, Margaret B., 953
 McConnaughey, B. H., 387, 456, 1125
 McConnel, J. P. S., 984
 McCoy, E., 259
 McDougall, K. D., 561, 1019
 McEwen, G. F., 300, 1040
 McGowan, John A., 637, 960, 967, 1146
 McIntosh, W. C., 8, 1117
 McIntyre, A. D., 65
 McKelvey, V. E., 965
 McKernan, D. L., 980
 McLachlan, R., 1180
 McLeod, James Archie, 422
 McMillin, H. C., 174, 1148
 McNab, J. A., 514
 McNeill, F. A., 1031
 Mead, A. D., 487, 982
 Medcof, J. C., 982, 1131
 Mediterranean, algae, 1045, 1047
 complex in Caspian, 895
 immigrants, Black Sea, 843, 861
 oxygen 221
 plankton in Black Sea, 833
 Medusae, 1108
 Medwecka-Kornaś, A., 1046
 Meek, A., 1204
Megadenus, 424
Megadyples antipodes, 1221
Megaptera nodosa, 1225
 Meier, K., 840
 Meigen, W., 261, 264, 266
Melaluca, 725
Melampus coffeus, 721
Melanella, 424
Melanocetus murrayi, 643
Melaraphé, 549
Melibe rangii, 432
Melinna, 848, 849, 853
 biocoenosis, 861
 cristata, 495
 palmata, 845, 847
Melita palmata, 781
Melitodes, 621
Mellita, 595
 lata, 1192
 quinquiesperforata, 602
Melo, 622
Melobesia, 261, 1017
Melosira, 830
 Melville, J. C. 1140
 Membranes, 134
Membranipora, 704, 792, 846, 847
 crustulenta, 781, 782, 790, 793
 pilosa, 853
Menidia beryllina peninsulæ, 716
 Menilite shales, 971
 Menon, M. A. S., 1020
 Menon, M. Devidas, 985
 Menzel, R. Winston, 1131
 Menzies, Robert J., 46, 373, 709, 1029, 1032, 1156
 Meotic Basin, 803
Mercenaria, 1144
 mercenaria, 451, 1143
Mercierella enigmata, 704, 1024, 1028, 1124
 distribution, 706
 Meredith, Sheila Stoppford, 1156
 Mereschkowsky, M. C., 393
Merehriz rudis, 846, 847
 Mermithoidea, 422
Merocystis kahalæ, 418
Merogregarina amaroucii, 418
 Merriman, D., 5, 78, 1086, 1208, 1209
 Merrin, S., 258
 Mersey estuary, 1023, 1024
 Mertens, Robert, 1211, 1213, 1214
 Merwin, H. E., 250, 255
 Merz, A., 808, 818, 819
Mesidotea, 784, 795, 900, 1155
 entomon, 771, 783, 789
 Mesobathyal, 27
Mesochra heldii, 845
Mesodinium, 957
 pulex, 957
 rubrum, 957, 980
Mesogobius gymnotrachelus, 862
 Mesolittoral, 27
Mesomysis, 863
 Mesomysis helleri, 856
 kowalewskyi, 856, 864
 Mesopelagic zone, 641, 643
 Mesopsammon fauna, 596, 791
Mesothuria murrayi, 659
 Mesozoa, 419
 Messina, Straits of, 956, 960
 mortality, 977, 988
 Metabolic processes in the sea, 387
 Metabolic rates, 167
 of Mytilidae (fig.), 478
 Metabolism of the sea, 384
 and pressure, 504
 Metabolites and setting, 483-484
 Metahaline, 25
 Metallic ions, 347
Metapenaeus monoceros, 138
Metarhombognathus, 1176
 Metcalf, M. M., 150, 1201
 Metcalf, Z. P. 1180
 METEOR, 199, 214, 219, 320
 Metering device, 75
 Methane, in sediments, 733
 Methane-oxidizing bacteria 1037
Melopus circumlabens, 419
Metridia longa, 1169
 lucens, 1166

- Metridium senile*, 636
Metrobates, 1178
Metschnikovia, 900
 Meunier, K., 1125
 Mexico, Gulf of, 220, 1018
 bio-facies, 1019
 corals, 1100
 Foraminifera, 1080
 lithofacies, 1019
 mortality, 987
 oyster biocoenosis, 1130
 Meyer, H., 1189
 Meyer, H. A., 4
 Meyer, J. A., 494
 Meyer, K., 1071
 Meyer, P. F., 315, 987, 1208
 Michael, E. L., 535, 1201
 Michael, R., 974
 MICHAEL SARS Expedition, 1014
 Michaux, C., 346
 Microatoll zone, 618, facing 621
 Microbenthos, 791
Microcalanus pusillus, 1168
 pygmaeus, 1167
Microcoleus, 707
 chthonoplastes, 725, 1042, 1049
Microcotyle, 420
Microcystis, 855
 aeruginosa, 955
 Microfauna, of *Fucus* (fig.), 41
 and salinity (fig.), 710
 samplers, 71
 sorting, 73
 Microfilters, 384
Microlene, 653
Micromelania, 803, 307
 Micromelaniidae, 899
 Micronesia, algae, 1048
 Microorganisms, biomass, 1038
 Micro-organisms in Black Sea, 825-827
Micropharynx, 420
Microserpula inflata, 1122, 1123
Microspio theeli, 680
Microspira, 820, 895
 Microsporidia, 419
 Microtripylea, 1071
Microvelia, 1178
 Middle neritic, 19
 Middlekauff, W. W., 1178
 Midlittoral zone, 547
 Midwater trawl, Isaacs-Kidd, 78-79
 Mielck, W., 1071
 Migration routes, of whales, 1223
 Mikkelsen, V., 727
 Milk fish, 141, 144
 Millar, R. H., 1199
 Millard, A. H., 1023, 1024
 Millard, Naomi, 1028
Millepora, 615, 619, 622, 1091, 1094
 Miller, A. K., 1140
 Miller, Arthur R., 230
 Miller, E. M., 165
 Miller, D. N., 1078
 Miller, E. Morton, 979
 Miller, Milton A., 1028
 Miller, R. C., 212, 230, 680, 688, 1030
 Miller, R. S., 40
 platyphylla, 615, 620, 622; facing 620
 tenera, 622
 Miller, W. R., 725, 727, 1055
 Miller, W. S., 451
 Millipedes, 1175
 Milne, A., 150, 685, 686, 699
 Milne, L. J., 603
 Milne, M. J., 603
 Milne-Edwards, H., 1, 3, 7, 9, 55
 Minchin, E. A., 264, 1085
 Mineralization in Black Sea, 823
 Minkiewicz, Romauld, 399
Minous inermis, 394
Minuartia peploides, 1057
Minuca, 1156
 Mirinov, G. N., 871
 Mission Bay, 688, 690, 711
 Missiroli, A., 1179
 Mississippi Delta, 692, 693, 729
 Mississippi River, 691, 946, 1130
 Mistakidis, M. M., 505, 510
 Mitchell, R. L., 352, 353, 354
Mitella, 976
 polymerus, 550
 Mites, marine, 1175
 Mitsukuri, K., 497, 560, 981, 1189, 1194
 Mitten crab, 698
 Mixed tides, 551
 Miyadi, D., 67, 504, 505, 510, 512, 514, 515, 516, 518, 520,
 688, 689, 731, 1025
 Miyake, Y., 204, 251
Mnestra parasites, 393
 Moberg, Erik, 211, 226, 257, 298, 330, 333, 688
 Möbius, K. (also as Moebius, K.), 4, 5, 7, 11, 174, 175, 400,
 497, 849; 1131
Modiola (= *Modiolus*), 803, 1144
 adriatica, 847
 modiolus, 494
 phasiolina, 808, 829, 845, 848
 striata, 1029
Modiolaria, 407
 discors, 497
 nigra, 495
Modiolicola insignis, 425
Moerisia pallasi, 895
 Mohler, W. A., 982
 Mohr, Erna, 989
 Moiseev, P. A., 1208
 Mokievskii, O. B., 599, 601, 846
Mola, 404
 Molander, A. R., 63, 67, 470, 485, 495, 512, 515
 Mold, James D., 953
 Moldenke, Harold N., 1055
 Mölder, Karl, 1065
 Molds, 1035
 Mole crickets, 603
Molgula, 425, 1199
 Molina, J. J., 981
 Molinier, Roger, 724, 1055
 Molisch, H., 260, 1038
 Mollusca, 424, 1143
 in Baltic, 779
 carbonate deposition by, 266
 deep sea, 653
 growth temperatures (fig.), 268
Molpadia roretzi, 1194
Molpadomia, 1193

- Moll, Friedr., 1032
 Möller, L., 808, 818, 819
 Monhysteroidea, 422
 Monogenea, 420
 Monogononta, 422
 Monorhina, 1203
 Monstrilloida, 425
 Monterey Bay, silicates, 315
 Monterey, Calif., algae, 1047
 Monterey shales, 966, 970
 Moody, C. L., 69
 Moore, Hilary B., 213, 303, 377, 454, 484, 557, 559, 564, 567, 596, 683, 694, 700, 956, 1031, 1150, 1158, 1192, 1220
 Moore, H. F., 1131
 Moore, H. L., 974
 Moore, L. B., 549, 551, 1044
 Moore, M., 984
 Moorea, reefs, 1092
 Moorehouse, F. W., 611, 687, 1099, 1100
 Monaghan, P. H., 255, 257
Monachus, 1223
 monachus, 868
 Moniez, R., 1180
Monilia candida, 1037
Monobrachium parasitum, 393
Monobryozoon, 595
Monocanikus tomentosus, 394
 Monod, Th., 9, 54, 696
Monodacna, 803, 857, 864
 colorata, 806
 pontica, 806
 pseudocardium, 804
 Monnier, R. P., 953
Monstroma balticum, 786
Monstrilla helgolandica, 425
 Montgomery, Raymond B., 197, 200, 202
Montipora, 615, 618, 619, 620, 624, 628
 composita, 624
 foveolata, 620
 gaimardi, facing 626
 socialis, 620
 venosa, 620
 verrucosa, 622
 Mordukhai-Boltovskoi, F. D., 855, 857, 861, 863, 865
 Morell, Benjamin, 984
 Moret, L., 280, 942
 Morgulis, S. M., 385
 Mori, S., 599, 600
 Mori, Takajiro, 981
 Morishima, Masao, 1078
 Morita, R. Y., 1039
 Morotai Basin, oxygen, 228
 Morov, T., 865
 Morozova-Vodyanitskaya, N. V., 824, 826, 830, 831, 832, 838, 839, 840, 869, 870, 872
 Morrison, J. P. E., 622, 1093
 Morse, E. S., 1114
 Mortality of *Eurytemora hirundoides*, 794
 oysters, 946
 Mortensen, Th., 73, 497, 596, 598-599, 650, 1189, 1192, 1194
 Mortimer, C. H., 302
 Morton, J. E., 542, 1020
 Moruloidea, 419
 Mosquitoes, 148, 1178, 1181
 Morzhov, B., 818
 Mosby, Hakon, 217
 Mosby, O., 210, 222
 Moseley, H. N., 1141
 Moser, Fanny, 1108
 Moskvín, B. S., 865
 Mossel Bay mortality, 979
 Motag, C., 847
 Motoda, S., 57, 60, 454, 575, 610, 612, 1099, 1167
 Motile species in estuaries, 702
 Motomoura, Isao 1150
 Mouchet, Simone, 438, 1156
 Moul, Edwin T., 1051
 Moulting in crustacea, 269
 Moynier de Villepois, R., 266
 Mu flagellates, 120
 Mucous feeding nets, 12, 350
 Mud, bacteria in, 1035
 community, Sea of Azov, 861
 cracks, 733
 zones, Black Sea, 847
 nutrients released from, 302
 phosphate in, 303
Muggiaca konchi, 833
 Mugglin, Franz, 1140
Mugil, 394, 866, 867, 986
 auratus, 853, 908
 cephalus, 716
 saliens, 908
 Muir, John, 1055
 Muir-Wood, H., 379
 Mulder, A., 704
Mulinia lateralis, 716
 Müller, G. W., 1163
 Müller, J., 1, 4, 1195
 Muller, Siemon W., 17, 20
Mullus, 866
 barbatus, 908
 Munk, Walter H., 90, 380
Murex, 803
 Murman, communities, 1019
 mortality, 988
 Murman Current, 316
 Murphy, A. L., 982
 Murphy, Robert Cushman, 378, 980, 981, 1220
 Murray, John, 6, 19, 110, 119, 131, 174, 177, 178, 250, 277, 963, 966, 969, 988, 1014, 1071
 Murray Island, coral reef, 1098
 Murray's hypothesis, 949, 963
 Murre, 1221
 Musper, K. A. F. R., 967
 Mussett, Rene, 1055
Mustelus vulgaris, 421
 Mutualism (defined), 391; 430
 Mussel beds, 722
 Mussels, metabolism of, 386
Mya, 150, 151, 472, 482, 1144
 arenaria, 419, 425, 485, 494, 495, 498, 590, 680, 770, 777, 787, 789, 938, 978, 1143, 1144, 1147, 1148
 truncata, 495, 498
 Mya Sea, 770
Mycidium, 615, 624
 Myctophids, 643, 653
 Myers, Earl H., 1075, 1078
 Myers, G. S., 143, 148, 698, 945
Mycicola metissiensis, 425
Myriacladus, 426
 Myriapoda, 1175

- Myriochele*, 657
Myriophyllum, 780, 782
 spicatum, 780, 789
Myriospora trophoniae, 418
Myriotrochus, 501, 655, 659, 661
 brunni, 659
Myrmecocystis viaticus, 846
Mysidacea, 1153
Mysis, 795, 900
 mixta, 708, 774, 783
 oculata, 700, 704, 708
 relicta, 700, 704, 708, 767, 771, 783, 784, 793, 794
 stenolepis, 708
Mystacocarida, 596, 1175, 1176
Mytilaster, 857, 908
 lineatus, 713
 monterosatoi, 804, 807
Mytilicola intestinalis, 425
Mytilidae, metabolic rates (fig.), 478
Mytilimeria nuttallii, 1149
Mytilus, 43, 150, 566, 795, 828, 829, 846, 848, 853, 908, 1132, 1189
 californianus, 267, 268, 273, 385, 536, 550, 1147, 1148
 edulis, 137, 267, 349, 351, 373, 419, 425, 480, 494, 495, 723, 770, 777, 782, 790, 978, 1020, 1028, 1144, 1145, 1148;
 facing 782
 diegensis, 938
 galloprovincialis, 393, 425, 828, 845, 846, 847, 852, 987
 muds, 848
 -Ostrea banks, Black Sea, 848
 zone, 845
Myxicola infundibulum, 494
Myxine glutinosa, 1203, 1204
Myxini, 1203
Myxophyceae, 1049
Myxosporidia, 419
Myzocytium proliferum, 1051
Myzostomida, 408, 417, 423
Nadson, S., 259, 279
Nagahama, Masaho, 1079
Nais elinguis, 790
Najas marina, 780, 782
Nakai, Zinziro, 1167
Nakazime, Masao, 1147
NAMIB, 955
Nani, Alberto, 951, 979
Nansen, F., 221, 301, 452
Naples, Bay of, Acantharia, 1072
 Ostracods, 1163
Zoological Station, 4, 7
Nardoa, 622
Narragansett Bay, Foraminifera, 1080
 mortality, 982
Nash, C. B., 687, 707
Nasr, A. H., 550, 573, 1047
Nassellaria, 1069, 1072
Nastase, G. J., 806
Nassa, 487, 803, 847
 nerilea, 846
 obsoleta, 421, 497
 reticulata, 494, 846, 847
Natica, 803, 805
 size of apex (fig.), 179
 groenlandica, 466
Natlant, Manley L., 1079
Natrix natrix natrix, 1213
 sipedon clarkii, 1213
 compressicauda, 1213, 1215
 tesalata, 846
The Natural History of European Seas, 2, 359
Naturalist's dredge, 73
Naubert, J., 982
Naucrates ductor, 404
Nautilus, 1135-1141
 alumnus, 1140
 macromphalus, 1135, 1136
 pompilius, 1135, 1136
 reperlus, 1140
 scrobiculatus, 1140
 stenomphalus, 1136
 umbilicatus, 1136
NAUTILUS, 222
The Nautilus (journal), 1143
Nautilus, paper, 267
Navalkar, B. S., 1056
Navicula, 725
 ammophila, 1059
 cancellata, 1039
 digito-radiata, 1059
Naville, A., 432
Nayudu, Ramaswami M., 985
Neaera abbreviata, 495
Neanthes, 1117
 lighti, 700
 virens, 135
Nebalia, 420
Nechaev, A., 818, 847, 853, 865, 866
Nectonema agile, 423
Nectonematoidea, 423
Nectonemertes, 1119
Needle Fish, mortality, 988
Needler, Alfreda B., 982
Needler, A. W. H., 982
Needham, J., 698
Neel, J. K., 602
Negative characteristics, Caspian fauna, 898
Nekton, 21
Nektoplanktonic, 21
Nelson, T. C., 170, 683, 687, 688, 982, 1020
Nemalion, 841
Nemalionales, 261
Nematalycus nematoides, 1176
Nematoda, 422, 1118
Nematomorpha, 423
Nematopsis ostreum, 418
 prytherchi, 418
 legeri, 418
Nemertina, 422, 1119
Nemertopsis actinophila, 403
Neobalaena marginata, 1223
Neomeris, 261, 1223
Neopilina galathea, 1146
Neothyris lenticularis, 1113
Nephrops norvegicus, 494
Nephthys, 495, 846, 847
 elamellata, 657
 homberti, 494, 497, 713, 845, 853
 scolopendroides, 494
Neptunea, 1146

- Nereis*, 421, 495, 847, 857, 1117
 in Caspian Sea, 910-912
diversicolor, 135, 137, 138, 494, 497, 777, 790, 843, 978, 1016, 1026, 1123, 1126
 and Ostracoda community, 858
fuscata, 399, 403, 1126
irrorata, 1123
japonica, 1125
oxyroda, 1125
pelagica, 494, 1123
occidentalis, 716
profundi, 657
succinea, 853, 909-912, 1125
 community, 858
virens, 494
zonata, 713
Nereocystis-Amphithoe fasciation, 1041
Nerilla, 1126
Nerine, 846, 848
cirratulus, 494, 1016
Neritides, 848
tridentata, 846
Nerita picea, 554
plicata, 554
 Neritacea, 696
 Neritic (defined), 19; 21
 benthos, 19
 sediments, 284
Neritina, 150, 803, 806
reclivata, 709
virginea, 150, 709, 1126
Nerophis, 989
Nesippus alatus, 425
 Nesteroff, W., 258, 261, 280, 614, 1099
 Netherlands mortality, 987
 Net rates of oxygen change, 200
 Nets, burning of, 959
 quantitative, 56
 standardized, 57
 Neu, W., 863, 1159, 1220
 Neumann, G., 681, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817
 Neumann, Gunther, 1201
 New England algae, 1048
 fishes, 1209
 marshes, 726
 New Hebrides, reef, 1090
 New South Wales, intertidal, 1017, 1020
 oysters, 1132
 New Zealand, 379
 algae, 1044
 intertidal, 1019
 mortality, 982
 Newcombe, C. L., 150, 498, 596, 687, 688, 689, 690, 1147
 Newell, G. E., 472, 1123, 1125
 Newell, Irwin M., 364, 1176
 Newell, N. D., 257, 626, 628, 1100
 Newhouse, J., 565, 572, 707, 1024
 Newport Bay, (Calif.), 689, 727, 732, 1025
 Niche (defined), 40
 Nicholas, H. M., 432
 Nicholls, A. G., 212, 436, 437, 438
 Nicholls, G. E., 1056, 1190
 Nichols, H. W., 273
 Nichols, R. L., 676
 Nicholson, A. J., 42
 Nicholson, E. M.; 1220
 Nicol, E. A. T., 688, 689
 Nielsen, E. Steeman, (*see* Steeman Nielsen)
 Nieburger, M., 113
 Nielsen, J. N., 221
 Nightingale, H. W., 980
 Niino, Hiroshi, 730
 Nikitin, V. N., (*or* Nikitine, W. N.), 193, 455, 808, 815, 823, 827, 830, 831, 833, 834, 836, 838, 841, 844, 847, 865, 869, 909, 916, 1125, 1132
 Nikolsky, George, 360
Ninoë fusca, 657
Niphon spinosus, 978
 Nippotaeniidae, 422
 Nishikawa, T., 951, 981
 Nitrate, Baltic (fig.), 320
 Barents Sea (fig.), 318
 North Sea (fig.), 318
 Gulf of Maine (fig.), 312
 Indian Ocean (fig.), 331
 Sumatra (fig.), 332
 Weddell Sea (fig.), 330
 Nitrite, Gulf of Maine (fig.), 312, 313
 Nitrobacter flora, 307
Nitrocras typtica, 845
 Nitrogen and ammonia, Pacific (fig.), 308
 Nitrogen cycle, 305-309
 Nitrogen in estuaries, 692
 Nitrogen-fixing bacteria, 1036, 1040
Nitzschia, 122, 349
closterium, 446, 1059, 1063
Noctiluca, 449, 871, 953, 957, 984
miliaris, 449, 792, 833, 958, 986
scintillans, 981
 Noddack, I., 352, 353
 Noddack, W., 352, 353
Nodularia, 792
spumigena, 792
 Nomejko, C. A., 169
Nomeus gronovi, 403
 Nomura, S., 1115
 Noodt, E., 88-90, 91, 92
 Nordenskiöld, Eric, 4, 791, 988
 Nordli, E., 444, 953, 983
 Norman, J. R., 166, 404, 1208
 Norris, R. M., 724
 North, W. J., 278, 387, 576, 1150
 North Atlantic Deep water, 201
 North Atlantic Intermediate water, 222
 North Carolina, algae, 1049
 fishes, 1209
 mortality, 982
 oysters, 1130
 North Equatorial Current, 228
 North Polar Sea, 221, 338
 North Sea, 221
 Acantharia, 1071
 copepods, 1168
 mortality, 978
 nutrients, 316
 phosphates, 315
 Northcraft, R. D., 542, 551, 561, 562, 569, 1047
 Northrop, J., 69
 Norton, Richard D., 1079
 Norton, Oswald, 1147
 Norway, coral reefs, 1093
 mortality, 983
 zooplankton, 1168

- Norwegian Sea, 221
zooplankton, 1167
- Nosema*, 419
notabilis, 419
- Nostoc muscorum*, 1049
- Noterus clavicornis*, 780
- Notodelphoidea, 425
- Notomastus*, 657, 1126
- Noumea, coral reefs, 1091
- Nova Scotia, intertidal, 1021
- Novorossiisk Bay, zooplankton, 834
- Nucella lapillus*, 564
- Nucula*, 45, 472, 655, 659
nitida, 494, 495
nucleus, 393, 494, 805
tumida, 393
- Nuculana pustulosa*, 393
- Nudicola monacanthi*, 394
- Nueces River, 946
- Nullipores, 1101
- Nümann, W., 866, 867, 868, 986
- Numanoi, H., 269
- Núñez Ortega, D. A., 978, 985
- Nunnemacher, R. F., 453
- Nunes, L. P., 393
- Nupsammidae, 1093
- Nutman, S. R., 11, 682
- Nutrient cycle, 298-310
of estuaries, 690
in Artic waters, 319
- Nutrient salts, 297-343
- Nutrients, coastal waters, 311-320
circulation of, 337
in estuaries, 690
inshore waters, 311-320
layering of, 337
and oxygen (fig.), 206
and productivity, 314-316
regeneration of, 302
release of, 302
- Nutting, C. C., 1106
- Nybelin, O., 653, 654, 664
- Nyctiphanes*, 453
australis, 372, 374-375
capensis, 372, 374
couchi, 372, 374, 792
simplex, 372, 374
- Nyholm, K. G., 70, 74
- Nylon, in nets, 56
- Nymphaea alba*, 789
- Nymphon procerum*, 664
- Nymphonella lapetus*, 1175
- O^{18}/O^{16} ratio and oxygen minimum, 209
- Oaki, R., 54, 650
- Oakley, K. P., 379
- Ob, estuary, 680
- Obelia*, 445
- Ocean, Pleistocene, 105
- Oceanic, 19
- Oceanodroma leucorhoa leucorhoa*, 1220
- Oceans, latitudinal features, 87, 88
- Ochrida, Lake, 900
- Ochridospongia*, 900
- Ochthebius*, 853, 1177
marinus, 781
gaudricollis, 1179
- Octalasmis mulleri*, 425
- Octocorals, 1105
- Octopus*, 419, 978
vulgaris, 946, 1147
- Ocyrode*, 422, 602, 1156
albicans, 603; fig., 602
ceratophthalma, 603
gaudichaudi, 603; facing 587
food chain, facing 587
occidentalis, 603
- Ocyropodidae, 1156
- Odessa, limans, 854
- Odobenus divergens*, 1224
- Odontosyllis*, 928
enopla, 928
hyalina, 928
phosphorea, 922
- Odostomia*, 424, 659, 662
rissoides, 425
scalaris, 425
- Odum, E. P., 17, 29, 40, 47, 261, 279, 612, 1014
- Odum, Howard T., 34, 39, 141, 261, 263, 279, 355, 612, 1025
- Oehlert, D. P., 1114
- Oekiocolax plagiostomorum*, 420
- Offatts Bayou mortality, 953, 985
- Offshore bars, 589
- Ohle, Waldemar, 231
- Ohshima, H., 397, 398
- Oikopleura dioica*, 833, 834
- Oil bacteria, 1037
- Oinomikado, T., 1079
- Oithona nana*, 792, 833, 856, 1156
plumifera, 1167
similis, 792, 833, 834, 1165, 1167, 1168
- Okada, Y., 1111
- Okhotsk Sea, copepods, 1165
fishes, 1209
- Okuda, S., 392, 1125, 1176
- Okul, A. V., 856, 857
- Old, M. C., 420, 1032, 1132
- Oligocene temperatures, 246, 668
- Oligochaeta, 423
- Olina*, 622
- de Oliveira, Lejeune P. H., 707, 984, 1025, 1156
- Olivella*, 395, 595
- Oliver, W. R. B., 508, 595, 1140
- Olivier, G., 1120
- Olofson, Ossian, 700
- Olson, E. C., 42, 43
- Olson, R. A., 231, 690
- Oltmann, (theory), 125
- Omer-Cooper, J., 697
- Ommastrephes sloani pacificus*, 1148
- Oncea mediterranea*, 833
venusta, 1165
- Oncophora neglecta*, 423
- Oncorhynchus keta*, 164
- O'Neill, Ted, 727, 729
- Oneirophanta*, 654
- Oörites, 257, 261
- Oosting, Henry, J., 727, 1056
- Oozes, 450
- Oparin, A. I., 33, 385
- Operculina-Ozawaia* facies, 1078
- Ophelia*, 482, 599, 846, 1127
cluthensis, 1123
larvae, 484
- Ophichthus*, 1214

- Ophioderma brevispina*, 1188, 1189
Ophiomusium planum, 654
Ophiopholis aculeata, 494
Ophiothrix, 623
 echinata, 841
 fragilis, 489, 494
Ophiura, 487, 488
 albida, 488, 489, 493, 494, 495, 497, 776, 777
 brevispina, 489
 loveni, 658, 662
 texturata, 488, 494, 495, 497
Ophiurespira weilli, 419
 Ophiuroids, 1187
 deep sea, 652
Ophyotrocha, 1124
Opophorhynchus parfaii, 654
 Oppenheimer, C. H., 385, 647, 1039
Opsanus, 419, 1206
 Optimal intensities (phytoplankton), 121
 Orange-peel bucket, 69
 d'Orbigny, Alcide, 1, 537, 981
Orbitolites, 430, 431, 438
Orcaella, 1223
Orchestia, 601, 848
 bottae, 846
 gammarella, 846
 littorea, 494, 854
 montagu, 846
 ochotensis, 601
 variation, 848
Orchitophyra stellarum, 419
Oreaster, 622
 Oregon, algae, 1044
 Öresund, 30, 752, 1022
 arthropods, 1154
 echinoderms, 1188
 polychaetes, 1123
 Organic carbonate, precipitation, 259
 Organic content of invertebrates (table), 494, 495, 496
 Organic cycle, Black Sea, 823-826
 Organic matter, in beaches, 593
 Black Sea, 824, 825
 decomposition, 205
 in sea, 388
 of sediments, 730
 Organic mechanisms of carbonate solution, 279
 precipitation, 259
 production, 445, 446
 substances, 12, 383-389
 Organisms and sediment types, Murmansk (fig.), 720
 Orr, A. P., 192, 303, 311, 446, 611, 687, 983, 1013, 1065, 1098, 1100, 1167
 Orr, S. P., 281
 Orthonectida, 419
 Ortmann, A. E., 20, 23, 142, 360, 696, 1100
 Orton, J. H., 63, 167, 169, 173, 267, 487, 497, 564, 1115, 1132
 Orton's rule, 169
 Osadchih, M., 319
 Osborn, H., 1180
 Osburn, R. C., 5, 1019, 1109, 1111
Oscillatoria, 261
 Osgood, Wilfred. H., 1225
 Oshima mortality, 974
 Oslo Fjord, 953
 zooplankton, 1168
 Osmoregulation, 135, 136, 138, 1022
 and temperature, 139
 fishes, 144
 vertebrates, 143-145
 Osmerids, distribution (fig.), 363
Osmerus eperlanus, 987
 Osmosis, (defined), 133
 Osmotic pressure, 134
Osphrolax pellucidus, 989
 Ostefeld, Carl Hansen, 1065
 Oster, R. H., 122, 123, 192
 Ostracoda, 425, 1161
Ostrea, 803, 828, 848, 1029, 1129
 adriatica, 1132
 angasi, 1132
 ariakensis, 1133
 chiloensis, 1130
 circumpicta, 1133
 commercialis, 1132
 crista-galli, 1130
 cucullata, 1129, 1130, 1132
 denselamellosa, 1133
 edulis, 172, 435, 722, 922, 1124, 1129, 1130, 1132
 periodicity (fig.), 920
 sublamellosa, 847
 taurica, 847
 equestris, 1131
 forskalli, 1130
 gigas (see also *Crassostrea gigas*), 1130, 1133
 multistriata, 1133
 rhizophorae, 1131
 taurica, 805, 1132
 vitrefacta, 1132
Ostreobium, 279, 622
 Ostroumov, A. A., 841
Ostroumovia, 864
 Östvedt, Ole-Johan, 1167
Otaria byronia, 1225
Otocelis chirodotae, 420
Otolypophonemertes, 595, 601
 Otter, G. W., 280, 622, 1032
 Otter trawl, 75, 78; fig., 76
 Otterstrøm, C. V., 953, 957, 958
Ouroseutes, 426
 Outer neritic, 19
 Van Overbeek, J., 1049
 Overgaard, C., 73
 Ovey, C. D., 1081
 Owen, B. B., 254, 266
 Owen, D. M., 56
 Owen, G., 1144
Owenia fusiformis, 494
 lobopygididilata(?), 657
 Owens Lake, 712
 Oxidative ratios, 206, 207
 Oxygen, annual changes, 189
 in atmosphere, 186
 biological consumption, 193-196
 changes in, 206
 and corals (fig.), 439
 -chlorinity correlations, 204
 consumption, 193
 Atlantic Ocean, 194
 California Coast, 194, 195
 North Atlantic, 195
 osmoregulation, 135
 and temperature, 167

- cycle, in estuaries, 687
 deep sea, 647
 deficit, in Pacific, 211
 -density correlation, 201
 in estuaries, 688
 of interstitial water, 592, 732
 minimum, 200, 209, 211
 -minimum zone, 207-211
 Atlantic, 220
 Indian Ocean, 223
 mixing, 197
 lack and mortality, 959
 nutrients (fig.), 206
 photosynthetic production, 190
 percentage saturation, 186
 and plankton, 455
 and populations, 211-213
 production, 192
 by symbiotic algae, 437
 and σ_t (fig.), 203
 and salinity (fig.), 202
 -salinity correlation, 211, 202
 above sediments, 215
 in sediments, Gulf of Mexico (fig.), 216
 solubility, 186, 187
 and temperature (fig.), 203
 transport of, 197
 vertical distribution (fig.), 188, 191
 vertical mixing, 198
 and zonation, 566
- Oxyphora*, 615, 624
 Oxyuroidea, 422
 Oyster banks, 45
 Oyster biology, 11, 1132
 crab, 407
 culture, 1131, 1132
 community, 416
 drills, 1144
 reefs, 45, 722, 724; facing 725
 Oysters, 150, 168, 172, 451, 696, 1129
 carbonate deposition by, 268
 mortality of, 946
 and parasitism, 416
 and sponges, 1084
- pH in Baltic, 766
 deep sea, 647
 in estuaries, 689
 of interstitial water, 592
 in pools, 572
 of sea water, 249
 of sediments, 733
 cycle in tidepools, 573
- Pachygrapsus*, 843, 849
 biocoenosis, 848
 crassipes, 550, 1155
 marmoratus, 845, 846
- Pachymenia*, 1048
Pachytila turtur, 1221
 vittata, 1221
- Pacific coast, Bryozoa, 1111
 shore crabs, 1155
 Pacific Grove, zonation, 551
 Pacific Marine Biological Laboratory, 558
 Pacific Ocean, nutrients, 330
 oxygen, 224
 zooplankton, 1167
- Eastern, oxygen, 227
 oxygen-minimum zone, 226
 North, Plankton, 1167
 Northeast, oxygen, 229
 South, oxygen, 224
 Southwestern North, oxygen, 228
- Packard, A. S., 979, 1180
 Packard, E. L., 69, 505, 1147
 Padang Highlands shales, 966
- Padina*, 261, 262, 541
 pavonia, 841, 1017, 1047
- Paessler, R., 1221
- Pagurid crabs, 1155
- Paguristes oculatus*, 400, 1156
- Pagurus*, 392
 arrosor, 392, 401
 floridanus, 401
 granosimanus, 550
 granosus, 575
 pubescens, 426
 samuelensis, 575
- Painter, R. H., 1180
- Palacky, Joh., 988
- Palaemon serratus*, 646
 squilla, 843
- Palaemonetes*, 696, 704, 721
 antennarius, 709
 intermedius, 709
 kadiakensis, 709
 paludosus, 709
 rugio, 709
 varians, 709, 781, 782
 vulgaris, 709
- Palaemonidae, 142, 148, 696
- Palao (or Palau), 1016, 1099
 algae, 1045
 corals, 1089
 ecology, 1016
- Paleacanthocephala, 422
- Paleoecology, 2, 9, 10
- Paleobiologica, 10
- Paleogeography, Eocene (fig.), 379
- Pallasa*, 784
 quadrispinosa, 771, 783
- Palolo worm, 171, 918, 924, 926
 Atlantic, 929-930
- Palmatier, E. A., 707
- Palmer, R. H., 1100
- Palmipes membranaceus*, 1188
- Palombi, A., 393
- Panama Bay, corals, 1092
- Panama Canal and fishes, 1207
- Panama, Gulf of, 1017
 oxygen, 226
- Pandalidae, 172
- Pandalus borealis*, 168
 montagu, 168
- Pandora inaequalis*, 1143
 pinna, 1143
- Panicum virgatum*, 726, 1055
- Panikkar, N. K., 137, 139, 141, 142, 144, 694, 698, 928, 1025, 1209
- Panning, A., 698, 1195
- Pantin, C. F. A., 137, 264
- Pantopoda, 1175
- Panulirus interruptus*, 636, 637

- Papefuss, G. F., 261
Paphia (= *Tapes*)
 philippinarum, 938
 siaminea, 498
 undulata, 497
 Papp, A., 1156
Paracalanus parvus, 792, 833, 834, 1165, 1167, 1168
Paracalliactis michaelisarsi, 402
 stephensoni, 401
 validiviae, 401
Paracartia latisetosa, 856
Paracentrotus lividus, 1021, 1191
Parachaenia myae, 419
 Parachute net, 61
Paracrinus mormoratus, 1207
Paracyamus boopis, 426, 1158
Paracyathus, 636
Paracymus aeneus, 853
Paracybrideis fennica, 783
 Paradise, W. E. J., 1100
Parahalomitra, 619
Paralabrax clathratus, 637
 Parallel communities, 470, 521
Paramecium bursaria, 429
Paramoeba pigmentifera, 418
Paramysis, 863, 864, 865
 Paranzella, 78
Parapagurus, 653
 andersoni, 401
 armatus, 402
 bicristatus, 401
 pilosimanus, 401
Parapholas, 1029
 Parasites, of fishes, 421
 role in ecology, 413
 Parasitic castration, 414
 snails, 424
 Parasitism (defined), 391, 413
Parasthenelia forficula litoralis, 845
 Parat, M., 505, 515, 518
Paravortex cardii, 420
Paravorticella clymenellae, 419
Paradwardisia abyssorum, 653
 lemchei, 656
 Park, O., 917, 1012
 Park, Thomas, 1012
 Parke, Mary, 1046
 Parker, F. L., 707, 1079
 Parker, G. H., 501, 1195, 1225
 Parker, J. R., 161
 Parker, T. J., 1071
Paroriza grevei, 659
Parorchis avitus, 421
 Parr, A. E., 208, 209, 210, 445, 956
 Particle transport (fig.), 591
 Pascher, A., 957
 Pasley, G. G., 232
 Paspalev, G. V., 818, 832, 851, 865, 987
 Passive period, of predators, 489
 Past environments, reconstruction of, 103-105
 Patapsco River, 690
 Patch reefs, 623
Patella, 280, 564, 1144, 1149
 caerulea, 1149
 pontica, 845
 vulgata, 1149
Patellina, 1075
 corrugata, 1078
 Patrick, Ruth, 1065
 Patterson, H., 110
 Patton, R. T., 727
 Pauca, Mircea, 971
 Paul, H. D., 1132
 Paul, J. H., 269
 Pauli, V. L., 856, 867
 Paulsen, Ove, 983
Pavona, 615, 618, 620
 clavus, 622
 Pax, F., 1108
 Payne, F., 898
 Pchelina, Z. M., 869
 Peacock, A. D., 1225
 Peairs, L. M., 160
 Pearl fish, 404
 Pearl formation, 421
 Pearse, A. S., 129, 139, 143, 145, 146, 147, 148, 150, 166, 167, 171, 177, 417, 576, 593, 595, 596, 599, 603, 693, 1020, 1025, 1085, 1132, 1172, 1177, 1180, 1211
 Pearson, J. C., 147, 1209
 Pearson, Joseph, 1156
 Pebble Beach, mortality, 988
 Pechuel-Loesche, Eduard, 983
 Peckham, S. F., 981
Pecten, 472, 803
 glaber, 805, 846
 groenlandicus, 466
 irradians, 1145
 madisonius, 355
 opercularis, 1144
 ponticus, 847
 septemradiatus, 495, 497
 varius, 805
 yessonensis, 170, 498
Pectinaria, 857
 auricomma, 480
 koreni, 494, 495, 497, 1127
Pectinia, 622
Pectunculus, 803
Pedalion oxyuris, 856
 Peel, J. L., 1013
 Peirson, Jean F., 707, 1079
 Pelagic (defined), 21
 fauna, 367, 368
 realms, 367
 sediments, 283, 645
Pelagodiscus, 1113
Pelagonemertes, 1119
Pelagophycus porra, 637
 Pelagosome, 258
Pelagohuria, 643
Pelamis platurus, 1214
Pelecanoides urinatrix, 1221
Pelecus, 867, 868
 cultratus, 772, 774
 Pelecypoda, 424
 Pelicans, 1219
 Pellegrin, J., 403
Pelmatohydra oligactis, 780, 790
 Pelogloea, 44, 385
 Pelseneer, Paul, 9, 1143, 1147
Peltogaster paguri, 426
Pelvetia, 550

- canaliculata*, 560, 1045
fastigiata, 556
 Pemba Island, coral reefs, 1092
 Pembrokeshire, intertidal, 1017
 Peneidae, 172
Penaeus, 166
 aztecus, 139, 1018
 -*Paracentropistes pomospillus* community, 1018
 -*Pilar cordata-Syacium gunteri* community, 1018
 -*Prionotus rubio* community, 1018
 setiferus, 139, 147, 151, 171
Peneroplis pertusus, 281, 418
 Penetrantiidae, 423
 Penetration, in Caspian, 899
 in various estuaries (figs.), 686, 699, 701, 702
 Penfound, W. T., 727, 729, 1056
 Penguins, 1219, 1220, 1221
 Penikese, 5
 algae, 1044
Peniagone lugubris, 653
Peniagone vedeli, 659, sp., 659
Penicillus, 261, 262
 Pennak, R. W., 592, 596, 598, 601
 Pennatulacea, 1106
Pennella, 425
 filosa, 425
 Pentastomida, 424
Peraclis bispinosa, 643
Perca fluviatilis, 795
Percarina, 862
 Percival, E., 146, 148, 1115
 Pérès, J., 27, 638
Periamma naresi, 659
Pericaryon cesticola, 416
Periclimenes, 404, 622
Peridinium, 121, 792, 830, 831
 divergens, 851
 knipowitschi, 855
 triquetrum, 121, 983
Perigonimus abyssii, 393
 *cirratu*s, 783
 pugetensis, 394
Perinereis brevicirris, 1125
 cultrifera, 494
 Periodicity, 917
 of red water, 935
 of starfish, 937
Periophtalmus, 624
 koelreuteri, 728
Perissopus communis, 425
 Peritricha, 419
 Perkins, E. J., 592
 Perraton, Christopher, 726, 727, 1056
 Perrier, Edmond, 668
 Perrier, Rémy, 664
 Persian Gulf, productivity, 501
 Peruvian coast, oxygen, 226
 Peruvian Current, 335, 953
 Peru mortality, 953, 979, 981
 Pescadores Islands mortality, 949, 978
*Petaloproctus cirratu*s(?), 657
Petalostoma minutum, 419
 Peter, K., 161
 Peters, Hans M., 1156
 Peters, N., 1071
 Petersen, C. G. J., 5, 6, 7, 12, 35, 46, 61, 63, 64, 68, 69, 461,
 467, 468, 470, 477, 488, 489, 494, 495, 496, 497, 505, 508,
 509, 510, 512, 514, 516, 518, 523, 722, 774, 789
 Petersen, W. H., 305
 Petersen communities, validity of, 467
 Petersen's community concept, 467
 Petersen grab, 6, 61-64
 Petersen methods, expanded, 471
 Petit, G., 47, 1026, 1051
 Petkow, S., 839
 Petrels, 1219
Petricola, 280, 1030
 pholadiformis, 1032
Petrochirus bahamensis, 401
 Petroleum, bacteria, 1040
 origin of, 961
Petromyzon, 1203
 marinus, 1203, 1204
Petrosia, 847
 Petrossian, A., 259
 Petrunkevitch, A., 1197
 Pettersson, Hans, 110
 Pettersson, O., 67, 149
 Pettersson sampler, 61, 71
 Pfaff, J. R., 1192
 Pfannenstiel, M., 802, 804, 805, 806, 807, 862
 Pfeffer, Georg, 981
 Pfeiffer, H., 1056
Phaeocystis, 958
 Phagocytic cell in *Tridacna*, 435
Phalanisus, 1178
Phalera bimaculata, 846
Phascolosoma, 646
 flagriferum, 654
 Phaseolina Muds, 848
 Phelps, A., 315
 Phifer, L. D., 692, 1065
 Philippi, E., 963, 966
 Philippine Trench, animals (fig.), 655
 Philippines, bryozoa 1110
 coral reefs 1094
 Foraminifera, 1076, 1077
 mortality, 981
 oysters, 1133
 Philips, J. B., 981
Philometra globiceps, 422
 grayi, 422
Philine aperta, 494, 495, 497
Philomedes interpuncta, 1162
 Phleger, Fred B., 71, 707, 728, 1079
 Phleger bottom sampler, 71
Phoca, 784, 1223
 hispida, 771, 783
Phocaena communis, 978
 phocaena, 868
 relicta, 868
Pholadidea, 1029
 parva, 424
Pholas, 1030
Phormidium tenue, 1049
 Phoronida, 424
Phoronis, 845, 847
 ovalis, 424, 1031
 Phosphates, Antarctic (fig.), 328-329
 Atlantic, 321
 Baltic (fig.), 320
 Barents Sea (fig.), 318

- Phosphates—(con'd.)
 Black Sea, 823
 estuarine mud, 1027
 cycles in estuaries, 691
 deep sea, 647
 Indian Ocean (fig.), 328–329, 331
 of mud, 303
 North Sea, 315; (fig.), 316, 317
 NW Atlantic (fig.), 322, 323
 Pacific (fig.), 333
 Pacific Equatorial (fig.), 299
 Sargasso Sea, 320
 S. Atlantic (fig.), 326–327, 328
 Sumatra (fig.), 332
 Phosphatic deposits, 967
 Phosphorite, 936–965
 Phosphorus, Black Sea, 822
 cycle, 303–305, 1039
 estuary (fig.), 691
 regeneration of, 302
 in sediment, 731
 Photic zone, 23, 120, 446, 641
 Photocell, 110
 Photographic measurement of light, 109
 Photography, deep-sea, 56
 as ecological method, 69
 underwater, 55
 Photometers, 110–111; (fig.), 111
 Photosynthesis, 120, 122, 123, 445, 446
 efficiency of, 35
 light bottle technique, 190
 measurements, 193
Phragmites communis, 780, 782, 789
 Phycobilins, 124
 Phycomycetes, 1039
Phyllirrhoë, 432
bucephala, 393
 Phyllobothrioidea, 421
Phyllobothrium lactuca, 421
Phyllodoce, 846
maculata, 1016
Phyllophora, 847, 848, 849
 biomass, 840
brodiaei, 788
rubens, 829, 839, 840
 Phyllophora Meadows, 848
 Phyllophora Sea, 840
Phyllospadix, 552, 724
torreyi, 633
Phyllospora, 1017
Phyllosporgia foliascens, 623
Physsa, 355
fontinalis, 779
Physalia, 403, 602
Physeter catodon, 1225
 Phytobenthos, Black Sea, 839–841
 Caspian Sea, 902
 Phytomastigina, 418
 Phytoplankton, 120, 124, 443
 Phytoplankton, Black Sea, 830–832, 869
 Caspian Sea, 901
 in estuaries, 707
 Gulf of Varna, 832
 outbursts, 448
 Sea of Azov, 855–856
 Varna Bay, 832
 Varna Lake, 851
Phronima, 426
 Pia, J., 258, 261, 1032
 Picard, J., 151, 638, 724, 1055
 Pickford, G. E., 369, 1117, 1147
 Pieh, Sylvia, 136
 Pierce, L. E., 1118
 Piersig, R., 424
 Pigments, 121
 accessory, 125
 algae, (table) 124
 diatom, 121
 echinoderms, 1189
 littoral algae, 124
 Piha, N. Z., zonation, 1041
 Pike, R. B., 1156
Pilema pulmo, 833
 Pillsbury, R. W., 1047
 Pilot fish, 404
Pilumnopus tridentatus, 787
 Pioneer plants, of marshes, 725
 Pipefishes, 144
 Pipe rocks, 604
 Pinckard, J. H., 121, 963
Pinctada, 620, 623
margaritifera, 1126
 Pinkerton, Richard C., 34, 40
Pinna, 622, 623
carnea, 1149
Pinnixa, 397, 477
rathbuni community, 518
Pinnotheres ostrinum, 407, 427
 Pirrie, M. E., 596
Pisaster, 405
giganteus, 637
Piscicola rapax, 423
 Piscicolidae, 1125
 Piston strokes, in Baltic, 757
 Pismo clam, 395, 592, 597, 936–937
 Pitelka, Frank A., 719
 Pitsyk, G. K., 870
Placobranchus ocellatus, 432
Plagiostomum, 420
Planaria, 790
Planes minutus, 445
 PLANET, 230
 Plankton, 4, 11, 21, 443
 abundances, Black Sea, 839
 abundance, Sea of Azov, 856
 and bacteria, 1039
 Baltic, 792, 794
 Batum, 831
 Black Sea, 830–839, 841, 870
 Bosphorus (fig.), 836
 Caspian Sea, 902
 complexes, 46
 conservation on reefs, 453, 611–612
 distribution (fig.), 367
 and evolution, 455
 -Expedition, 4
 Isefjord, 1166
 net, 1, 56
 net, high speed (fig.), 60
 North Pacific, 1167
 and oil, 961
 production in Baltic, 794
 N. Europe, 1073
 Black Sea, 870

- recorder, 57
 research, 4
 significance of, 456
 Sea of Azov, 856
 Planktonic biota, 368
Plantago, 726
 maritima, 1054, 1057
 Plass, G. N., 244, 249
Platanista, 1223
 Plate, L., 404, 1100
Platydon cancellatus, 1033, 1149
Platygyra, 615, 618, 619, 622
 lamellina, 627
Platymonas, 1047
Platynereis, 928
 dumerilii, 368, 922, 927, 929
 megaloψs, 928
Plectonema, 279, 491
 calothrichoides, 1044
 norvegicum, 1044
 noslocorum, 1049
Plesiastraea, 620, 1090
Pleurobrachia, 871
 pileus, 792, 833
Pleurogramma antarcticum, 942, 951, 979
Pleuronectes fesus, 795, 908
 limanda, 795
 platessa, 646, 794
Pleurosigma aestuarii, 1059
 balticum, 1059
Pleurotoma, 803
Plexaura flexuosa, 1105
Pocillopora, 615, 618, 622, 628, 1090, 1092, 1093, 1096; facing
 620
 bulbosa, 924
 caespitosa, 407, 1095
 damicornis, 622, 623, 627, 1090, 1096, 1097
 danae, 615, 620
 elegans, 615, 620
 eydouxii, 622, 623
 meandrina, 615, 620
 verrucosa, 615, 620, 627
Podabacia, 619, 622
Podarke pugettensis, facing 394
Podocerus brasiliensis, 716
 falcatus, 494
Podocorella minoi, 394
Podocoryne carnea, 393
Podon, 792
 polyphemoides, 793, 833, 856
Podophora atrata, 1192
 Poggendorff, J. C., 974
 Pogonophora, 369, 665, 1197
 Poisson, Henri, 1132
Polinices, 595, 622
Polistotrema stoufi, 1203
 Pollen (for oysters), 685
Pollicipes spinosus, 1158
 Pollock, J. B., 1100
Polycelis nigra, 790
 Polychaetes, 423, 1120
 commensal, 405
Polycirrus arenivorus, 425
 Polycladida, 420
 Polycopidae, 1162
Polydactylus, 399
 cupulifer, 400
 Polydora, 419, 1030, 1125
 ligni, 716
 pacifica, 1126
 websteri, 150, 423
Polygordius, 848, 849
 sands, 846
 ponticus, 846, 848
Polykrikos schwartzi, 981
 Polymastigina, 418
Polymesoda floridana, 716
 Polynoid commensals, 405
 Polyopisthocotylea, 420
Polyorchis, 1176
Polypodium, 420
 hydriforme, 394
Polysiphonia elongata, 839
 fastigiata, 1013
 nigrescens, 779, 788, 1042
 opaca, 839, 857
 spinosa, 857
 subulifera, 839
 variegata, 839
Polystomella crispa, 1077
 Polyzoa (see Bryozoa), 1109, 1110
Pomacenerus, 1206
Pomatoceros, 847
 triqueter, 264, 480, 1123
Pomatomus, 866
Pomatoschistus, 899, 908
 Pomerat, C. M., 566, 567
Pontarachna punctulum, 424
 Pontic basin, 804
 Pontic relicts in Caspian, 895
 Pontic Sea, 803
Pontogammarus, 599, 846, 857
 aralensis, 914
 maoticus, 843, 864
 community, 858
 variation, 861
Pontomyia, 1178, 1182
 natans, 1177, 1179
Pontoporeia, 495, 795, 900
 affinis, 496, 497, 708, 771, 777, 783, 784, 789
 community, 516
 femorata, 497, 708, 764, 774, 777, 783, 785, 789, 790
 -Mesidotea community, 790
Pontosphaera huxleyi, 444
 Poole, H. H., 109, 110, 111, 118, 119
 Pools, variation (fig.), 574, 575
 Pope, Clifford H., 1217
 Pope, E. C., 362, 981, 1016, 1017, 1020, 1175
 Popofsky, A., 175, 1071
 Popovici, Zaharia, 35, 818, 846, 847, 865, 951, 979, 987, 989
 Population dynamics, 2, 42, 1210
 Populations, fisheries, 1210
 fluctuations, 935
 resurgent, 935-937
 Pora, E. A., 843
 Pora, M., 843
Porania pulvillus, 1189
Porcellana, 847
Porcellanaster coeruleus, 653
Porcellia labellatus, 846
 PORCUPINE, 185
 Porifera, 419, 1083-1086
 carbonate deposition by, 264

- Porites*, 264, 615, 618, 619, 624, 627, 1096
andrewsi, 619, 622, 623
 association, 623
 zone, 622; facing 626
annae, 627
astreoides, 1091
clavaria, 1091
lichen, 620, 627
lobata, 620
lutea, 619, 620, 621, 622, 623, 627; facing 621
Porolithon, 261, 615
Poromya, 1149
Porospora gigantea, 418
Porphyra umbilicalis, 1047
 Porpoise, food of, 868
 mortality, 978
Porrocaecum, 422
 Porsild, Morten Pedersen, 960, 969, 972, 987
 Port Elizabeth mortality, 979
 Port Erin Bay, 689
 beach, 588
 laboratory, 8
 Port Jackson mortality, 982
 Porter, Joseph Y., 984
Porterinema fluviatile, 782
 Portier, P., 269, 1039
Portlandia, 655, 659
 arctica community, 517
 Portsmouth, N. H., 1080
 Foraminifera, 1080
 Portugal mortality, 983
 Portuguese man-of-war fish, 403
Portunus, 847
 arcuatus, 846, 848
 depurator, 418, 847
 holsatus, 846
 nasutus, 1154
 sayi, 368
 tubercalatus, 1189
 Poseidon (fig.), 12
Posidonia, 552, 724, 1052, 1054, 1055
 associations, 1047
 oceanica, 724
Posodacna, 803
 Post, Rita J., 1080
 Post-glacial sediments, 1036
Postelsia, 566
 palmaeformis, 539, 551
 Posthill, B. N., 230
 Postma, H., 683, 1026
 Potomac River, oyster bars, 1130
Potamilla, 1030
 myriops, 392
 reniformis, 418
 torelli, 392
Potamogeton, 853, 780, 782, 789, 902
 marinus, 857
 panormitanus, 780
 pectinatus, 780, 1052
 vaginatus, 783
Potamoxyrgus crystallinus, 786
 jenkinsi, 786
 Pottier, Jacques, 958
 Potts, F. A., 407, 922, 1185
 Potts, W. T. W., 265, 266, 267
 Pouchet, G., 265, 989
 Poulsen, E. M., 7
Pourtalesia(?) *aurorae*, 658
 Powell, A. W. B., 74, 508, 512, 513, 514, 520, 1140
 Powell, D. E., 78
 Powers, E. B., 689
 Powers, Philip B. A., 982
Prasiola meridionalis, 549
 mexicana, 549
 Prat, S., 261
 Pratje, A., 982
 Pratje, O., 941, 970, 1014, 1100
 Pratt, D. M., 303, 707
 Pratt, E. M., 432
 Pratt, Henry S., 424
 Pratt, M. D., 54, 73
Praunus flexuosus, 790
 inermis, 790
 Preble, Edward A., 1225
 Precipitation (chemical), of aragonite, 256
 of calcite, 259
 of calcium carbonate, 255
 organic carbonate, 259
 Precipitation (meteorological), 91, 92
 Predator-prey relations, 487-488
 Predators, as productivity index, 500
 and young, balance, 486-489
 Prefixes, 19
Premnas, 403
 Prenant, M., 264, 266, 269
 Prescott, G. W., 951, 958
 Presence or absence factors, 536
 Pressure, effect on bacteria, 1040
 and carbonate solubility, 251
 deep sea, 645
 physiological effect, 646
 and metabolism, 503
 Priapulida, 422, 1120
Priapulius, 655, 658
 caudatus, 377, 789, 1120
 distribution, 377
 tuberculato-spinosus, 377
 Price, W. A., 675, 676
 Priele, 678
 Primary production in the sea, 36
 Primary productivity, 35
 Prince Edward Island, intertidal, 1021
Prionospio japonicus, 1126
 pinnata community, 520
 Pringle, J., 979
 Prichard, D., 679, 680, 683, 684, 686, 730
Proboscidactyla circumscabella, 392; facing 394
 flavicirrata, 392
 occidentalis, 392
 stellata, 392
 Proceedings of the Malacological Society of London, 1143
Procerodes, 137, 141
 distribution, 136
 lobata, 846
 ulvae, 136
 volume, 137
 Production, 35, 443; (defined), 491
 annual, 388, 499
 Black Sea, 871
 level-bottom, 489-492
 Limfjord (fig.), 500
 oceanic, 122
 organic, 445
 in sea, 446

- Productivity, 35, 493; defined, 491
 atoll, 1020
 bacterial, 503
 Black Sea, 865-872
 deep sea, 501
 at depths, 503
 of Laguna Madre, 716
 Limfjord, 500
 and nutrients, 314-316
 of oceans, 102-103; (fig.), 104
 Persian Gulf, 501
 on reefs, 612
 researches in, 11
 Scoresby Sound, 501
 and sedimentation, 284
 Sivash, 714
Proleptus, 422
Promesostoma baltica, 780
 cochlearis, 780
 lugubra, 780
Propeamusium, 655, 659
Prorocentrum gracile, 121
 micans, 121, 123, 831, 851, 855, 963, 981, 983
 Prosobranchs and latitude (fig.), 465
 Prosser, C. Ladd, (ed), 135, 136, 141, 142, 1014
Protoma obscurum, 780, 783
Protankyra, 654
 bideniata, 397
 Proteocephaloidea, 421
Proteolepas bivincta, 426
 Proteomyxa, 418
Proteorhinus marmoratus, 862
 Protociliata, 419
Protocystris, 643
Protodrilus, 848
 flavocapitatus, 846
 rubropharyngeus, 1125
Protohydra leuckarti, 595, 780
 Protomonadina, 418
Protoopalina saturnalis, 419
Protomyzostomum polynephris, 423
 Protozoa, 418, 1069
Prottrichomonas legeri, 418
Protula protula, 494
Prunus maritima, 1057
 Pruthi, Hem Singh, 1181
 Provinces, 2, 172, 360-367
 Pruvot, G., 20, 172
 Pruvot-Fol, Alice, 1141
Prymnesium parvum, 953
 Pryanishnikov, N. G., 1037
Psammalthiomys pectinata, 1178
Psammecchinus microtuberculatus, 1191
 miliaris, 427, 968, 1191
Psammocora, 618
 gonagra, 438
Psammohydra nanna, 595
Pseudachorutes esakii, 1179
 Pseudaliidae, 422
Pseudalius inflexus, 422
Pseudemys floridana, 1213
Pseudicyema truncatum, 419
Pseudocalanus elongatus, 792, 833, 834, 1165, 1167, 1168
 minutus, 1166, 1167
Pseudochama exogyra, 636
Pseudocladochonus hicksoni, 1107
Pseudodiaptomus euryhalinus, 146
Pseudoklossia pectinis, 418
Pseudoliparis amblystomopsis, 661
 Pseudophyllidea, 421
Pseudomonas calcis, 260
 calciprecipitans, 260
Pseudorca, 1224
Pseudopotamilla intermedia, 392
 ocellata, 392
Pseudosarcus, 1032
 Pseudoscorpions, 1176
Pseudostichopus villosus, 659
Pseudovermis, 595
Psychropotes, 652, 654; facing 651
 Psychrosphere, 21, 641, 643
 Pterocera, 1149
Pterodina, 856
 Pteropods, 282, 450
Pterospora maldaneorum, 418
Ptilocodium repens, 392
Ptilosarcus sinuosus, 392
Puccinellia maritima, 1054
 Puerto Rico Deep, 654
 Puerto Rico, oysters, 1131
 Puffins, 1221
 Puget Sound, nutrients, 315
Pungilus, 864
 platygaster, 862
 Purasjoki, K. J., 751, 757, 791, 1120
 Purchon, R. D., 1016, 1032
 Purer, E. A., 727, 1056
 Puri, H. S., 17
Purpura (see *Thais*)
 lapillus, 1150
 Pütter, August, 12, 436
Pycnodonte, 1129
 Pycnogonida, 424, 1175, 1176
 Pye Finch, K. A., 1020, 1028
Pygoscelis adeliae, 1220
Pygospio, 722
 elegans, 480, 497, 777
Pylaiella, 788
 fulvescens, 1042
 rupicola, 779, 782, 788, 1045
 Pyramidellidae, 408, 424
 Pyramids, ecological, 34
 of mass and number (fig.), 35
Pyrazus, 281, 624
 palustris, 728
 Pyron, J. H., 1042
 Pyrosoma, 1201
Pyura haustor, 636
 stolonifera, 946
Pyxinoides balani, 418
 Q₁₀, 159, 160, 166
 Quantitative methods in ecology, 474
 Quarnero, Gulf of, 3
 Quatrefages, A. de, 3, 55
 Quayle, D. B., 498
 Queensland, reef, destroyed, 1095
 Quenstedt, W., 282
 Quick, H. E., 497
 Quigley, J. P., 141
Quinqueloculina, 1079
 Quoy, Jean René, 989
 Rabaud, E., 1126
 Rabinowitch, E. I., 35, 36, 121, 123, 125
 Rabor, D. S., 1214

- Rachycentron*, 152
 Radiation, solar, 112-114
 Radiolaria, 131, 450, 643, 1069-72
 zooxanthellae in, 431
Radiorotula orbiculus, 1191
 Rae, K. M., 1168
 Rafter, T. A., 243
 Rahm, Gilbert, 981
 Rai, H. S., 1129
 Raitt, R. W., 454
Raja clavata, 421
 Rajcevic, B., 731
 Rakestraw, N. W., 186, 187, 189, 190, 194, 209, 211, 220, 305, 306, 309, 312, 313
Ralfsia, 845
 Ralph, P. M., 44, 1028
 Ramage, W. D., 680, 688
 Ramsden, Charles, T., 1213
Rana cancrivora, 1211, 1212
 cyanophlyctis, 1211
 esculenta, 1211
 ridibunda, 1211, 1212
 sphenocephala, 1212
 temporaria, 1211
 tigrina, 1211
 Rance, estuary, 1024
 Rand, R. W., 984
 Randall, J. E., 1090
 Randers Fjord, 700, 775
 Raney, Edward C., 1203
Rangia cuneata, 150, 709
 flexuosa, 709
 Rankama, K., 131
 Rankin, M. N., 1221
 Ranson, G., 258, 1100, 1132
Ranunculus, 780
 obtusiflorus, 789
 Ranzi, S., 927, 928
 Ranzoli, F., 1023
 Rao, H. S., 1209
 Rao, K. Pampapathi, 166, 167, 267, 268, 351, 1147, 1148
 Rapean, J. C., 1028
 Rapson, A. M., 597, 601
 Raroia, reefs, 1100
 Rarotonga, reefs, 1092
 von Rath, G., 986
 Rathbun, R., 1100
 Ratios, of isotopes, 244
 von Raupach, F., 827, 829
 Rauther, M., 1118
 Rauzer-Chernousova, D. M., 829
 Ravich-Shcherbo, J. A., 823
 Rawitscher, Felix K., 1047
 Rawson, D. S., 143
 Rawson, Rawson W., 989
 Raymond, Percy E., 132
 Rawitz, B., 266
 Raymont, J. E. G., 11, 688, 707, 1166, 1168
 Rebikoff, Dimitri, 55
 Recent carbonate sediments, 282
 Rechnitzer, A., 920
 Reconstruction of Caspian basin, 906-912
 Recrystallization at Bikini, 277
 of calcareous skeletons, 275
 Recurring mortality, 942
 Red alga zone, 618
 Red clay, 645
 Red Sea, annelids, 1124
 coral reefs, 1092, 1094, 1097, 1099
 fishes, 1206
 Foraminifera, 1080
 mortality, 985
 oxygen, 223
 oysters, 1130
 Red tide, 35, 448, 935
 Red water, 448, 935, 951, 953, 958
 in California, 965
 Redeke, H. C., 11, 23, 24, 146, 694, 703, 705, 707, 722, 763, 1163
 Redfield, A. C., 43, 44, 186, 187, 189, 190, 191, 192, 194, 197, 201, 205, 206, 207, 208, 209, 210, 215, 231, 303, 309, 313, 324, 367, 447, 452, 456, 1168
 Reduction of size in Baltic, 777
 Reed, John F., 1056
 Reef flat, 618
 pools, 279
 Reefs, worm, 1126
 Rees, C. B., 1168
 Rees, Kenneth T., 1047
 Rees, W. J., 1147
 Reflectivity, 113
 Regan, C. T., 177, 373
 Regenerative processes, 298
 Regnard, Paul, 110, 646
 Rehder, H. A., 1029
 Reibisch, J., 161
 Reid, M. E., 173
 Reijne, A., 535, 572
 Reimers, H., 1126
 Reinhard, E. G., 395, 1152
 Reiner, E. R., 566
 Reisch, Donald J., 1026
 Reitemeier, R. F., 255
 Relicts, in Baltic, 771
 Black Sea, 861-865
 in estuaries, 700
 living fossils, 667, 1113, 1137, 1146
 Remane, Adolf, 11, 24, 73, 149, 468, 469, 470, 471, 473, 474, 490, 510, 595, 596, 597, 700, 702, 703, 751, 763, 774, 777, 779, 781, 789, 790, 791, 792, 1014, 1026, 1118, 1126
 Remanetierchen, 790-791
Remora, 405 (fig.); 404, 427
 Renard, A. F., 963, 968
Remiera, 847
 Renn, Charles E., 194, 305, 306, 1039
 Renouf, L. P. W., 497, 1199
 Reproduction in Baltic, 777
 Reproductive stenotherms, 376
 Reptiles, 1213
 insular, 1214
 Respiration, copepods, 1166
 dark bottle technique, 191
 Resurgent populations, 935, 937
Retusa, 848
 truncatula, 805
 Reuning, E., 984
 Reuszer, H. W., 309, 1039
 Reville, Roger, 55, 100, 187, 215, 239, 242, 243, 244, 251, 252, 257, 263, 264, 277, 279, 283, 449, 970
 Reynoldson, T. B., 41
 Rhabdisoidea, 422
Rhabditis ocypodis, 422
 Rhabditoidea, 422
 Rhabdocoela, 420

- Rhabdoliths, 444
Rhabdopleura normani, 1197
Rhagovelia, 1178
Rheumobates crinius, 1180
Rhincalanus nasutus, 833
Rhinoptera bomasus, 421
Rhipocephalus, 261
Rhithropanopeus harrisi, 271
Rhizocaryum concavum, 419
 Rhizocephala, 426
 abyssal, 663
Rhizoclonium, 125, 707
 riparium, 725
Rhizocrinus lofolensis, 667
Rhizophora, 624, 728, 1053
 harrisoni, 1057
 mangle, 1053, 1057
 racemosa, 1057
Rhizophyidium conchii, 1051
 Rhizopoda, 418
Rhizopsammia minuta, 1089
Rhizosolenia, 316, 792, 830, 870, 901
 alata, 1067
 calcar-avis, 855, 908
 styliformis, 1062, 1064, 1067
Rhodochorton rolhii, 1048
Rhodomela subfusca, 779, 788
Rhombus maximus, 908
Rhopalura granosa, 419
 ophiocomae, 419
Rhodymenia, 349
 affinis, 551
 pacifica, 635
 palmata, 564
 Rhone delta, 1026
 Rhumbler, L., 174
 Rhynchobdellida, 423
Rhynchobolus, 847
Rhynchocoela, 422
Rhynchonerella, 1121
 Rhythm, 917
Rhytina, 1223
 Rice, L., 567
 Rich, John Lyon, 966
 Rich, W. H., 174
 Richards A. G., 269
 Richards, F. A., 185, 215
 Richards, F. T., 727
 Richards, P. W., 537
 Richardson, W. D., 1049
 Richdale, Lancelot Eric, 1221
 Richter, Rudolf, 10, 281, 734, 941, 967, 969, 1126
 Ricker, William E., 42, 1210
 Ricketts, E. F., 366, 505, 542, 556, 558, 567, 1015
 Ridley, Henry N., 1056
 Riddle, A. R., 1141
 Riedel, W. R., 283, 1069
 Riedl, R., 77
 Riegel, Byron, 953
 Van Riel, P. M., 215, 228, 229
 Riga, Gulf of, 753
 Rigby, J. K., 257, 628, 1100
 Riley, G. A., 11, 36, 38, 122, 123, 192, 193, 194, 195, 196, 197, 198, 200, 204, 207, 210, 219, 242, 337, 446, 691, 692, 957, 1066, 1168
 Ring-dredge, 1155
 Ringer, Sidney, 141
 Ringer's solution, 141
 Rio Grande Ridge, 327
 Ripple marks, 590
 Risbec, J., 1100
 Riss glaciation, 804
Rissoa, 846
 inconspicua, 497
 membranacea, 497
 Ritchie, James, 2
 Ritchie, J. A., 393
 Rittenberg, S. C., 260, 1036, 1039, 1040
 Ritter, Wm. E., 1201
 River flow to Black Sea, 819
 Rivers, tides in, 681
 Riviera mortality, 976
 Rivoire, Jean, 55
Rivularia, 261, 1048
 atra, 539
 Roberts, B., 558
 Robertson, Alice, 1111
 Robertson, G. M., 1203
 Robinson, J. D., 231, 239, 263, 264, 266, 269
 Robinson, R. J., 305, 308, 309, 315, 351
 Robson, G. C., 694
 Roch, Felix, 1032
 Le Roche, S., 151
 Rochford, D. J., 674, 680, 690, 691
 Rodionova, K. E., 1037
 Rogall, E., 310
 Rogers, C. F., 951, 953, 958
 Rogers, C. G., 142
 Rogers, F. L., 697
 Rogers, H. M., 679
 Rogers, Rosalie, 147
 Romania (*also as Roumania and Rumania*)
 Romanov, N. S., 865, 872, 916
 Romer, Alfred S., 145
 Roonwal, M. L., 1032
 Rosanov, A., 963
 del Rosario, F., 148
 Rosca, D. I., 843
 Rose, Walter, 1212
 Rosenberg, F. T., 1221
 Rosene, H. F., 568
Rosenvingea stellata, 1042
 Rosshy, C.-G., 194, 201, 202, 447
Rotalia, 1079
 Rotatoria, 422, 1118
 Rothe, F., 766, 794
 Rothpletz, A., 261
 Rothschild, Miriam, 421
 Rothwell, W. T., Jr., 1163
 Rotschi, Henry, 280
 Rottgardt, Dietrich, 24, 707, 710, 728
 Rotthauwe, H. W., 787
Rotula augusti, 1191
 Roughley, T. C., 401, 1132, 1209
 Roumania mortality, 987
 Rounsefell, George A., 987
 Roussel, H. Essai, 957, 986
 Routh, M., 1221
 Rowan, M. K., 1221
 Royal Commission to Investigate Fisheries Problems, 4
 Royce, W. F., 1204
 Rozeboom, L. E., 1181
 Rozhdestvensky, A., 818
 Rubey, W. W., 133, 143, 241, 245, 247, 712

- Rudd, DeForest P., 209
 Rudolph, E., 943, 945, 974, 976
 Ruedemann, Rudolf, 971
 Ruivo, Mario, 1051
 Rukina, E. A., 823, 824, 825, 958, 959, 1038
 Rumanian Limans, 853
Rumex crispus, 1057
 Runnström, S., 169, 451
Ruppia, 707, 725, 789, 902
 maritima, 1052, 1054, 1057
 Russell, C. R., 1118
 Russell, E. S., 151, 173, 1210
 Russell, F. S., 8, 212, 898, 1108
 Russell, M., 629
 Russell, P. F., 1181
 Russell, R. D., 681, 730
 Russell, R. J., 681, 693, 729, 730
 Russian Limans, 854
 Russian translation, 8
 Rustad, Einar, 123
Rutilus frisii, 862
 rutilus caspicus, 903, 911
 Ruttner, Franz, 1015
 Ruud, J. T., 63, 67, 71
 Rybnoe Khoziaistvo, 1205
 Ryther, J. H., 80, 192
Rytiphlaea tinctoria, 1132
Sabella penicillus, 494
Sabellaria, 848
 alveolata, 1126
 spinulosa, 1126
Sabellarifex, 1126
Saccocirrus, 848, 849
 papillocercus, 846, 848
 sands, 846
Saccopharynx, 643
Sacculina, 1158
 carcini, 426
 Sadowsky, A. A., 959
 Saelen, O. H., 688, 689
 Saif, S. R., 1157
 Sagami Bay mortality, 976
Sagartia parasitica, 419
troglydites, 501, 1090
Sagartiogeton californica, 402
Sagitta, 792
 elegans, 315, 792, 1118
 area, 1064
 euxina, 833, 834
 setosa, 315, 833, 834, 1118
 area, 1064
 Sahama, T. G., 131
 Said, Rusdi, 257, 1080
 Sakai, Tune, 1157
 Sakumato, D., 1097
 Salamanders, 1211
Salaria (Istiblennius) zebra, 575
Salda, 1177
 lateralis, 1178
 littoralis, 1178
 opacula, 1178
 pallipes, 1178
 pilosa, 1178
 pilosella, 1178
 setulosa, 1178
 Saldidae, 1178
Saldula pallipes, 1178
Salicornia, 707, 725, 1052
 ambigua, 1054
 australis, 727
 europaea, 727, 1057
 herbacea, 1054
 Salinity, (defined), 129
 in the abyss, 647
 Aral Sea, 913
 adaptation in Black Sea, 843
 annual (fig.), 90
 average, 129
 Baltic, 754, 756, 757, 758
 Black Sea, 809, 812, 813
 and bryozoa, 1110
 Caspian Sea, 894
 classifications, 24, 763
 and corals, 1088
 deep sea, 647
 and distribution, 146
 Sivish (fig.), 715
 of estuaries, 685
 fluctuations, Gulf of Finland, 760
 gradient, biomass, 704
 and species, 148, 704
 interstitial water, 732
 Laguna Madre, 687, 716
 as limiting factor, 150
 on marshes, 727
 and mass mortality, 945
 and microfauna (fig.), 710
 of mud, 677
 and phytoplankton, 447
 and plankton, 455
 profile, Laguna Madre (fig.), 687
 Sea of Azov, 855
 Skagerrak, 755
 of substrate, 677
 and size, 151, 152, 153, 777
 and species (fig.), 701, 702
 tolerances, 717
 of Caspian fauna, 864
 Varna Lake (fig.), 850, 851
 and zonation, 568
Salmo salar, 795
 trutta caspius, 900
 Salmon, intertidal spawning, 1207
 Salomon Atoll, coral reefs, 1094
 Salomon-Calvi, W., 805
 Salomonsen, Finn., 1221
Salpa, 420
 democratica, 1201
 Salpida, 1201
Salsola kali, 1057
 Salterns, 712
 Bulgaria, 853
 organisms, 712
 Salton Sea, 697, 712
 Salt effect, 205
 Salt tolerance, fishes, 148
 Salts, proportion, 129
 Samoa, 335
 alcyonarians, 1106
 reefs, 1097, 1099
Samolus valerandi, 1057
 Samplers, manufacturers of, 73
 Samples, handling, 68
 weighing, 69

- Sampling techniques, 68
 Samuel, Mary, 518, 520
 Samuelsson, G., 780
 San Ferdinandea mortality, 974
 San Francisco Bay, 682, 684, 687, 1024, 1030
 tides, 680
 San Diego Bay, 690
 San Diego, marsh, 1056
 San Pedro Bay, 690, 732
 Sanders, H. L., 1175
 Sanders, M. (after 1934, Brongersma-Sanders), 967
 Sanderson, E. D., 160
 Sandon, H., 1080
 Sandoz, Mildred, 147
 Sanibel Island, 949
 Sanidal, 19
 Sand community, Sea of Azov, 861
 Sand flats, of reefs, 623
 Sand fauna, food chain (fig.), 597
 Sand-living animals, 592
 Sandy beaches, 587
 Santa Lucia estuary, 713
 Santos-Pinto, Jaime Dos, 983
 Sapa, 979
 Sapanca, Lake, 862
 Sapper, Karl, 945, 974
 Sapropeium, 962
 Sarasin, Ed., 109
Sarcina ureae, 1040
 Sarcodina, 418, 1069
Sarcophyton, 620
Sarcophytum, 622, 627
Sarcotretes scopeli, 393
Sarda, 866, 867
 sarda, 866, 867 (fig.)
Sardina, 866
 pilchardus, 372, 374
 Sardine, spawning temp., 376
Sardinops caerulea, 372, 374
 ocellata, 372, 374
 melanosticta, 372, 375
 neopilchardus, 372, 374–375
 sagax, 372, 374
 Sargasso Sea, 220, 444
 oxygen, 222
 phosphate, 320
Sargassum, 623, 644
 fluitans, 444
 natans, 444
 Sargassum fauna, 367; (fig.), 368
 Sargent, M. C., 205, 576, 612, 687, 1020, 1100
 Sarmatian Basin, 803
 Sarmatian Fauna, 861
 Sarmatian fishes, 862–863
 Sarmatic relicts in Caspian, 895
 Sars, Georg O., 1163
 Sars, Michael, 1
 Saruhashi, K., 251
 Sasaki, T., 54, 650
 Sasic liman, 853
 Sato, S., 1167
 Saunders, L. G., 1181
 Sauramo, M., 769
 Savage, R. E., 958
 Savory, H. J., 1056
 Saville-Kent, W., 724, 1100, 1141
 Savilov, A. N., 1147
 Sawaya, P., 603
 Sawoe Basin, 229
Saxidomus giganteus, 498
 Sayle, M. H., 167
 Sayles, R. W., 285
 Scaccini, A., 1209
Scalibregma inflatum, 497
Scalpellum, 653, 660, 661, 662
 Scaphandre autonome, 55, 638
Scaphula deltae, 1029
Scatella seznotata, 1182
 Scattergood, L. W., 1209
 Scattering layer and oxygen, 213
 Scattering, light, 118
 Scavenging, chemical, 347, 351
 Schachter, Denise, 687, 729, 1026
 Schaefer, Milner B., 1210
 Schäfer, Wilhelm, 734, 1020, 1157
 Scheer, B. T., 44, 136, 1189
 Scheffer, V. B., 980
 Schenck, H. G., 55, 56, 364, 365, 367, 1080
 Scheuring, Ludwig, 960, 979
 Schewiakoff, W., 1072
 Schijfsma, K., 392
Schizamoeba salmonis, 418
Schizobranchia insignis, 392
 Schizogregarina, 418
 Schizopoda, 1153, 1154
Schizothaerus, 1025
 nuttali, 637
 Schlanger, S. O., 274
 Schlienz, W., 146
 Schlieper, C., 136, 137, 138, 776
 Schlottkte, E., 425, 1126
 Schmidt, Johannes, 203, 211, 224
 Schmidt, K. P., 19, 20, 148, 177, 463, 465, 611, 728, 801,
 1012, 1013, 1211, 1213, 1214
 Schmidt, P. J., 363, 1209
 Schmidt, W., 114
 Schmidt, W. J., 266, 1072
 Schmitt, W. L., 683, 684, 1151
 Schnakenbeck, W., 778, 984
 Schneider, Carlos Oliver, 981
 Schneider, G., 791, 1132
 Schoener, H., 925
 Scholander, P. F., 156, 167, 522
 Schnoor, H., 947
 Schott, G., 90, 97, 101, 102, 163, 225, 230, 970, 988, 989
 Schott, Wolfgang, 284, 970
 Schouteden, H., 1191
 Schreiber, E., 305
 Schreiber, S., 121, 123
 Schröder, O., 1072
 Schroeder, W. C., 1203, 1206, 1208
 Schuchert, C., 131, 1115
 Schultz, Alfred Reginald, 961
 Schultz, L. P., 403
 Schultze, Leonhard, 984
 Schulz, B., 757, 758, 791
 Schulz, E., 595, 596, 599
 Schumacher, Arnold A., 219
 Schütte, H., 733
 Schuurmans Stekhoven, J. H., Jr., 1118
 Schwabe, G. H., 981
 Schwartz, B., 1157
 Schwarz, A., 734
 Schweigger, Erwin, 980, 981

- Sciacchitano, I., 712
 Sciaenids, 1209
 Scilly Islands mortality, 987
Scirpus, 707, 725, 780, 789
 maritimus, 1057
 parvulus, 782
 tabernaemontani, 1057
 Sclar, Ruth, S., 1208
 Scleractinia, 1103
Sclerophyllum, 433
Scleroplax granulata, 396
 Scofield, W. L., 75
Scolecopsis fuliginosa, 494
Scolioptera latestriata, 1059
Scolithus, 1126
Scaloplos armiger, 774, 790
Scomber, 866, 867, 868
 scombrus, 866
 Scoop grab, 65
 Scoresby Sound, productivity, 501
Scorpaenichthys marmoratus, 637
 Scotland, algae, 1045, 1049
Scotoplanes, 659, 661
 galathea, 659
 globosa, 659
Scotoplanassa, 654
 translucida, 653
 Scott, A., 1155
 Scott, K. M. F., 1023, 1024
 Scripps canyon, 633; facing 633, 638
 biota, 635
 Scripps Institution of Oceanography, 9, 10, 225, 226, 232
Scrobicularia, 420
 plana, 495, 805
 SCUBA, 55
Scylla, 624
 serrata, 1152
Scyllaea pelagica, 368, 445
 Scyphozoa, 420, 1108
Scytosiphon, 845
 lamentarius, 839
 Sea and land, compared, 29
 Sea of Azov (see Azov, Sea of)
 Sea snakes, 1214
 Sea spiders, 1175
 Sea water, composition of, 129-133
 Seal, in Caspian, 900
 Sealing layer, 814
 Seaquakes and mortality, 945
 Sears, Mary, 226, 231
 Seashore study, 3
 Seaside station, 3
 Seasonal changes, beach, 587
 Seaton, S. L., 226
 Seaward reefs, 614-619
Sebastes marinus, 960, 979, 987
 norvegicus, 979
Sebastes atrovirens, 637
 Sebastopol, biocoenoses near (fig.), 844
 mortality, 989
 Secchi, P. A., 109
 Secchi disk, 109, 111
 Sedentaria, 423
 Sediments, abyssal region, 645
 bacteria in, 1036
 carbonates, 282
 Baltic, 768
 Black Sea, 807, 827-830
 and corals, 1088
 Danube, 828
 in estuaries, 677, 729
 fauna, 1020
 in marshes, 729
 of mass mortality regions, 960
 and Pleistocene stages, 283
 in tidal flats, 729
 oceanic, facing 668
 origin of, 731
 and organisms (fig.), 720
 reworking, 732
 Sea of Azov, 855
 solution in, 281
 Segal, Earl 1148
 Segerstråle, S. G., 149, 496, 497, 699, 704, 709, 730, 732, 751, 757, 758, 760, 761, 762, 763, 764, 765, 769, 777, 778, 780, 782, 785, 790
 Sei whale, 1225
 Seibert, G., 1039
 Seiches, 681
 Seilacher, A., 520, 595, 604
 Seisonacea, 422
 Seiwel, Gladys Eddy, 209, 324
 Seiwel, H. R., 189, 192, 194, 195, 196, 200, 202, 204, 208, 209, 219, 220, 221, 300, 313, 316, 320, 322, 323, 324
Selenidium potamillae, 418
 Selenium tubes, 110
Selenococcidium intermedium, 418
 Semon, Richard, 1141
 Semper, K., 163, 170, 174
 Senckenberg-am-Meer, 10, 722, 734
 Senckenbergiana, 10
 Sénégal, intertidal, 1020
 mortality, 983
 Senez, J., 1039
Sepia, 978
 officinalis, 418, 419, 949, 978, 1144
 Seres, 43
Serialopora, 618, 619, 628, 1097
 angulata, 624, 625
 hystrix, 622, 627, 1090, 1096
 Seriatoporidae, 1090
Seriola zonata, 394
 Sernander, R., 20
 Serpulidae, aragonite in, 265
 Serpuloid reefs, 716
Serrivomer sector, 643
Serularia, 445
 polyzonias, 847
Sesarma, 721
 Setchell, W. A., 168, 172, 373, 573, 1057, 1101
Setipinna breviceps, 709
 melanochir, 709
 taty, 709
 Settling, of barnacles, 1158
 Seurat, L. G., 407, 721
 Sewell, R. B. S., 1101, 1201
 Seydel, Emil, 983
 Shaler, N. S., 5, 587, 725, 946, 980, 1057
 Shales, origin of, 961, 971
 Shark teeth, 968
 Sharpe, J. S., 269
 Shaw, Napier, 29
 Shaw, Tsen-Hwang, 1212
 Shchapova, T. F., 1047

- Shearwaters, 1219, 1220, 1221
- Sheldon, R. P., 965
- Shelf, 21
communities, 461
deposits, Black Sea, 828
- Shelford, V. E., 5, 10, 43, 46, 110, 147, 161, 166, 172, 359, 467, 468, 470, 471, 472, 485, 505, 514, 518
- Shell, of brachiopods, 266
mollusks, 266-267
pigment and salinity, 150
thickness and salinity, 150
- Shelubsky, M., 953, 958
- Shepard, F. P., 69, 485, 591, 588, 589, 633, 675, 730, 732, 734, 964, 965, 966
- Sherwood, George H., 982
- Shipley, A. E., 1117
- Shokal'sky, J. M., 808, 810, 815, 969
- Shore community, Black Sea, 849
Sea of Azov, 861
- Shore ponds, salinity, 129
- Shotwell, J. A., 569, 575, 1150
- Shrock, R. R., 20
- Shufeldt, R. W., 1221
- Shuster, C. R. N., Jr., 1171, 1172
- Shvetsov, M. S., 260
- Siberian Shelf, 222
- Siboglinum ekmani*, 1197
- Siderastrea*, 437, 1104
radians, 1095
- von Sieberg, August, 945, 976
- Siegel, Sidney, 48
- Sigalion squamatum*, 494
- Sigara stagnalis*, 776
- Sigerfoos, C. P., 393, 1032
- Sigsbee trawl, 75; (fig.), 76
- Silica, in estuaries, 693
re-solution, 310
- Silicate, deep sea, 647
Monterey Bay, 315
equilibrium, 245
- Siliceous oozes, 645
- Silicoflagellates, 444, 1073
- Silicon cycle, 309-310
- Siliqua patula*, 498, 1148, 1149
- Simmons, S. W., 1177, 1181
- Simpson, Don G., 143
- Simpson, G. G., 695
- Simroth, H., 1148
- Singer, Charles, 1
- Sinking particles, 209
- Sinularia*, 620, 622; facing 626
- Sipho curtus*, 403
- Siphonales, 261
- Siphonaria alternata*, 1149
japonica, 1149
- Siphonariidae, 1150
- Siphonocladus*, 279
- Siphonophora, 1108
- Sipunculids, 423, 1120
symbiotic with corals, 1089
- Sirenia, 1223
- Sivash, 691, 713-716, 947
biomass, 713
productivity, 714
salinity, 129
- Sivickis, P. B., 1195
- Size, of corals, 1089
of diatoms, 1064
distribution, in beaches, 601
of mollusks, 151
reduction in Baltic, facing 782
and salinity, 777, 779; (fig.), 152
- Sjöstedt, Gunnar, 983
- Sjöstedt, Ingve, 1214
- Skager Rak, isopods, 1155
ostracods, 1162
- Skeletonema*, 901
costatum, 123, 830, 831, 855
- Skellam, J. G., 41
- Skogsberg, Tage, 315, 1163
- Skopintsev, B., 824
- Skottsberg, C., 1048
- Skud, Bernard Einar, 1207
- Skutch, A. F., 541, 550, 564, 575
- Skvortsov, E. F., 808, 815, 817, 830
- Slastenenko, E. P., 865
- Sleggs, G. F., 960
- Slevin, Joseph, R., 1214
- Slime eels, 1203
- Slime film, 44, 1027, 1028
in sea, 958
- Sloane, J. F., 1016
- Slobodkin, L. Basil, 946, 953, 956, 957, 984
- van Slooten J., 982
- Sloss, L. L., 734
- Sluiter, C. P., 974, 1101
- van Slyke, E., 1030
- Slump structures, 733
- Smallwood, Mabel E., 1157
- Smidt, E. L. B., 71, 73, 165, 482, 497, 505, 722, 947
- Smirnov, A. N., 865
- Smith, C. L., 257, 260, 265, 278
- Smith, Ed. H., 210, 220, 222
- Smith, Essie M., 1162, 1163
- Smith, F. G. Walton, 449, 567, 953, 956, 984, 1031, 1101
- Smith, G. M., 569, 1015, 1048
- Smith, Geoffrey, 1152
- Smith, H. G., 429, 436, 437, 438, 1101, 1199
- Smith, H. M., 981
- Smith, H. P., 303, 498, 539
- Smith, H. W., 138, 144, 145
- Smith, J. E., 63, 498
- Smith, J. L. B., 712, 947, 951, 964, 979, 1209
- Smith, James H. C., 121
- Smith, L. M., 1181
- Smith, Malcolm A., 1215
- Smith, N. R., 251, 260
- Smith, P. B., 451, 1131
- Smith, R. I., 700, 843, 1026, 1126
- Smith, S. I., 4, 5
- Smith, W., 65
- Smith, W. W., 1039
- Smith bottom sampler, 65
- SNÆLLIUS expedition, 228
- Snezhinskii, V. A., 53
- Snodgrass, R. E., 594
- Société de Biogéographie, 1015
- Soeda, Jansuke, 1148
- Sokolov, N., 802
- Solar constant, (defined), 112
energy, 112
radiation, 112-120, 445
- Solea vulgaris*, 978

- Solenogastres, 424
Solenosmilia variabilis, 1095
Solentia, 261
 Solitary corals, 1095
 Sollas, W. J., 697, 731
 Sollaud, E., 1152, 1157
 Solomon, M. E., 415
 Solomon Islands, coral reefs, 1095
 Solubility, aragonite, 252
 calcite, 252
 carbonates, 250
 products, aragonite, 265
 carbonates, 250
 Solution basins, 278
 Solution, of calcium carbonate, 277
 in deep sea, 283
 in mangrove swamps, 281
 in tide pools, 277
 on tropical reefs, 277
 Somaliland mortality, 985
 Sömme, J. D., 452
 Sømme, Olaug Mathisen, 1033
 Sommer, Hermann W., 953, 981
 Somova, N. M., 505, 508, 513, 514, 515, 516, 520
Sonchus arvensis, 1057
 Soot-Ryen, T., 313, 505, 518
Sorites, 1075
 Sorting, by ripples, 590
 Soule, Floyd M., 209, 210, 222, 330
 Sound, in ecology, 1166
 Sourie, R., 1020
 South Africa, corals, 1093
 estuaries, 1023
 intertidal, 9, 1021
 mortality, 979, 983, 984
 seaweed, 1045
 South Atlantic Ocean, (see Atlantic, South)
 South Carolina, oyster-grounds, 1130
 South Texas, Foraminifera, 1080
 Southern, R., 520, 1021
 Southern temperate waters, nutrients, 320
 Southgate, B. A., 677, 678, 701, 702, 703
 Southward, A. J., 370, 378, 564, 1021
 Sovinsky, V. K., 843
 Sözer, F., 863
 Spallanzani, L., 281
 Spärck, R., 71, 168, 467, 468, 470, 471, 475, 477, 481, 483, 491,
 493, 501, 504, 505, 506, 509, 510, 512, 514, 515, 516, 518,
 685, 792, 955, 959, 983, 984, 1148
 Sparrow, F. K., 1039
Spartina, 707, 721, 725, 1052
 alterniflora, 725, 726, 1053, 1054, 1055, 1057
 arundinacea, 1054
 community, 1053
 glabra, 1053, 1056
 leiantha, 727, 1054
 maritima, 1054
 patens, 725, 726, 1053, 1054, 1055, 1056, 1057
 pectinata, 1055
 stricta, 726
 glabra, 1054
 townsendii, 726, 1054, 1055, 1056
Spatangus, 477
 purpureus, 494, 1192
Spathipora, 423
 dirupae, 1031
 serium, 1031
 Spawning, of bottom invertebrates, 473
 of grunion, 919-920
 Spawning runs, mortality, 960
 Species and latitude (fig.), 464
 Species, numbers of, 465
 Spectrophotometer, 110
 Spender, M., 623, 728, 1161
 Speovelia maritima, 1179, 1182
 Sperm whale, 1225
 Sphaelaria, 788
 arctica, 783
 furcigera, 1042
 tribuloides, 1042
 Sphaerellaria, 1070, 1072
 Sphaerodorum, 1126
 Sphaeroides maculatus, 419
 Sphaeroma, 846, 848, 857, 1030, 1031
 hookeri, 497, 781, 782
 pentodon, 374-375
 pulchellum, 845, 846, 853
 Sphaerospora polymorpha, 419
 Sphaciospongia vesparia, 1085
 Sphirotricha, 419
 Sphyrion lumpi, 425
 Spiders, shore, 1176
 terrestrial, 1175
 Sphilhaus, Athelstan F., 230, 644
 Spilhaus-Miller sea sampler, 230
 Spindler, I. B., 808, 815
 Spio filicornis, 853
 ornatus, 846
 Spirillina, 1075
 vivipara, 1078
 Spirinchiulus starksi, 709
 thaleichthys, 709
 Spirographis, 846
 spallanzani, 494
 Spirogyra, 1051
 Spirorbis, 265, 445, 845, 922, 1120
 borealis, 480
 spirillum, 1125
 Spirula, 23
 spirula, 1144
 Spirulina subsalsa, 1042
 Spiruroidea, 422
 Spisula, 472
 subtruncaia, 477, 484, 495, 497
 Spitzbergen, polychaetes, 1122
 Splash pools, 258
 Spondylus, 437, 622, 623
 Sponges, 1083
 boring, 1084
 and fishes, 1206
 Spongilla, 847
 lacustris, 429
 Spongiocladia, 1048
 Spooner, G. M., 348, 683, 694, 700
 Sporozoa, 418
 Spotts, J. H., 257, 258, 274, 279, 285
 Spratella, 866, 867
 Spratt, T. A. B., 818
 Spring bottom sampler (fig.), 66
 Sproston, N. G., 557, 567
 Spumellaria, 1069
 Spurilla neopolitana, 432
 Spurway, Helen, 1211
 Spyridia, 707

- Squalus acanthias*, 315, 352
suckleyi, 141
 Squid, in canyons, 637
 mortalities, 967
 Srednyaya Guba (fig.), 720
 Stability, of Black Sea, 814, 815
 ocean waters, 94
 Stach, L. W., 1079
 Staesche, K., 959
 Stainforth, R. M., 1080
 Stalin Lake, 831
 Stammer, H. J., 782
 Stamp, W. R., 55
 Stanbury, R. A., 121
 Standard units of bottom areas, 475
 Standen, Robert, 1140
 Standing crop, 35, 388, 490; (defined), 489
 in deep sea, 503
 parallel (fig.), 502
 Stanger, D. Warren, 953
 Stanier, R. Y., 1039
 Stanmore Bay, New Zealand, intertidal, 1043
 Stapff, F. M., 984
 Staphylinids, 1177, 1179
 Statistics in ecology, 48
 Stauber, L. A., 407, 427, 1133
 Stauffer, Robert C., 1021
Staurocephalus rudolphi, 494
Stauroneis salina, 1059
 Steady state, 34
 Stearns, S., 980
 Stebbing, T. R. R., 1151
 Stechow, E., 392, 394
 Steeman Nielsen, E., 11, 37, 80, 103, 110, 122, 123, 192, 193,
 445, 446, 953, 955, 958, 983, 984
 Stefan, Nitu, 843
 Steinbeck, John, 366
 Stejneger, Leonhard, 1215
Stelletinopus, 1085
Stenella, 1224
Stenocuma tenuicanda, 864
Stenodus leucichthys, 900
 Stenzel, H. B., 1135
 Stephen, A. C., 497, 498, 508, 509, 512, 515, 519, 601, 1013,
 1120, 1192
Stephanoscyphus, 656
Stephanoseris, 1098
 Stephens, Edith L., 951, 958
 Stephenson, Anne, 9, 170, 537, 541, 543, 547, 548, 549,
 550, 551, 552, 553, 555, 568, 599, 628, 728, 928, 1019,
 1021, 1101
 Stephenson, H. K., 629
 Stephenson, J. P., 483
 Stephenson, T. A., 9, 362, 364, 401, 402, 537, 541, 543, 547,
 548, 549, 550, 551, 552, 553, 555, 563, 568, 577, 599,
 623, 628, 728, 1013, 1019, 1021, 1098, 1101, 1108
 Stephenson, W., 303, 690, 1027
Sternaspis sculata, 841
Sternopyx, 653
 Steubing, Eleonore, 1057
 Steuer, Adolf, 7, 171, 173, 175, 367, 957, 958, 1133, 1192
 Steven, G. A., 63
 Stevens, Belle, A., 1157
 Stephenson, R. E., 673, 727, 729, 730, 733
 Steyn, Douw G., 951, 958
 Stiasny, S., 378
Stichocotyle nephrops, 421
Stichopus, 405, 623, 637
 chlorontus, 1195
 japonicus, 497, 1194
 moebi, 1194
 parvimensis, 1195
 Stickleback, 145
Stictyosiphon tortilis, 788
 Stiglich, Germán, 981
Stilifer, 424
 Stock, J. H., 704, 1157
 Stock, (defined), 499
 Stohler R., 953
Stoichactis, 403, 618, 622, 624
 Stokes, J. L., 309, 1066
 Stomatopods, 1153
Stomias, 643
 Stommel, Henry, 231, 446, 680, 683, 1168
Stomoxys calcitrans, 1177, 1181
 Stone, Alan, 1181
 Storebaelt, 752
 Storer, Tracy, L., 1212
 Storey, Margaret, 165, 166, 949, 979
 Storms, mortality, 960
 Storrow, B., 1133
Storthyngura bentii, 660
 furcata, 660
 pulchra, 660
 van Straaten, L. M. J. U., 678, 732, 733
 Strain, H. H., 121, 125
 Strakhov, N. M., 802, 803, 804, 806, 821, 822, 823, 824, 827,
 828, 829, 830
 Strand and dune flora, 1052
 Strand Zone, Black Sea, 845-846
 Stranding, of Cetaceans, 1224
 mortality, 960
 Stratification in Black Sea, 810
 Stratosphere, 21
 (in Black Sea), 810
 Strauch, Alexander, 1215
 Straughan, Jeannette, 707, 1050
 Streamlines in estuary (fig.), 679
Streblospio dekhuyzeni, 780, 782
 Streets, T. H., 981
 Strenzke, Karl, 1176
 Stroikina, V. G., 870
 Ström, Kaare Munster, 491, 688, 689, 732, 986
Stromateus cinereus, 709
 niger, 709
Strombus, 622
 bubonius, 805
 gigas, 404
 Stromer von Reichenbach, E., 980
Strongylocentrotus, 280
 drobrachensis, 1030
 franciscanus, 637
 lividus, 1030
 Strongyloidea, 422
 Strontium, 348
 in algae, 262, 349
 in Foraminifera, 264
 in *Mytilus*, 349
 Strontium/calcium ratio, 277, 355
 Strontium carbonate, in molluscs, 268
 in warm waters, 273
 Struve, K., 494
 Stubbings, H. G., 956, 962, 969, 985, 1028, 1064, 1209
 Stuckey, R. G., 957, 980, 982

- Studer, Théophile, 1107
 Stumpnose Bay mortality, 984
 Stundl, K., 851
 Stunkard, H. L., 419
 Sturany, R., 1141
 Sturgeons, benthos, 912
 Stutzer, O., 946, 980
 Stuart, T. A., 1181
Styela montereyensis, 351
Stygicola, 667
Stylacis hooperi, 393
Stylaria lacustris, 790
Stylaster, 619
 asper, 624
Stylatula elongata, 636
Stylophorus, 653
Stylochoplana parasitica, 420
Stylochus ellipticus, 420
 frontalis, 420
 inimicus, 1132
 pilidium, 1130
 zebra, 420
Stylocoeniella, 618
Stylophora, 618, 619, 628, 1097
 mordax, 622
 pistillata, 622, 1090
Stylotella agminata, 1085
Styracaster, 652, 658
 horridus, 653, 654
Suaedia linearis, 1054
 maritima, 1054
 Subantarctic algae, 1048
 Subantarctic Intermediate layer, 217
Suberites domunculus, 399, 845
 Sublittoral, 17, 19
 benthos, 19
 communities, 461
 fringe, 552
 pools, 576
 zone, 551
 Submarine canyons, 633-639
 Submarine daylight, 120
 Subsurface salinities, Baltic, 763
 Substrate, 677
 choice of, 482
 and communities, 473
 Subtropical Convergence, 216, 223
 Succession, 43, 44
 marshes, 726
 North Sea, 1159
 Suctoria, 419
 Sudry, L., 730, 733
 Suess, H., 242, 243, 244
 Suez Canal, 223, 711-714
 Suez, Gulf of, reefs, 1090
 Sukkertoppen mortality, 949, 979
 Sulcatoxanthin, 121
 Sulfate, Black Sea, 821
 Sulfate-reducing bacteria, 1037, 1040
 Sulfate reduction, 260, 1036
 Sulfide in sand, 592
 Sulfur bacteria, 1035, 1036
 Sulfur cycle in beach (fig.), 593
 Sulfur, fish in, 712
 Sumatra mortality, 989
 Sumner, F. B., 5, 167, 683, 684
 Suomalainen, G., 786
 Super-oceanic deeps (term), 21
 Super-ozeanische Tiefen, 645
 Supralittoral, 17, 18, 19, 27
 fringe, 547
 pools, 572
 zone, 547, 549
 Supratidal, 18
 Surface currents, Black Sea, 815-818
 Surface salinity, ocean, 89, 129
 Surface temperature, average ocean, 89
 Surge channels, 615
 Sursalée, 25
 Suspended matter, 383
 Suspension feeders, 385
 Susquehanna River, 946
 Sutton, Doris, 352, 353, 354
 Suyehiro, Yasuo, 1209
 Svedelius, N., 779
 Svenonius, B., 791
 Sverdrup, H. U., 90, 93, 97, 186, 192, 194, 195, 204, 208, 209, 222, 226, 298, 299, 330, 335, 447, 814, 956, 970, 1015
 Sverdrup et al., 19, 20, 89, 92, 94, 100, 113, 114, 116, 119, 123, 129, 172, 174, 186, 205, 207, 211, 221, 223, 225, 226, 227, 230, 241, 243, 247, 299, 334, 336, 337, 443, 447, 491, 610, 681, 682, 947, 951, 955, 977, 979, 981, 1015
 Swamps, S. E. United States, 1057
 Swan, E. F., 485
 Swansea, algal growth, 1047
 Swanson, J. H., 505
 Swanson, Paul L., 1215
 Swanson, R. W., 965
 Swash bars, 590
 Swedish Deep-Sea Expedition, 213, 215, 223, 226, 227, 653, 654, 664
 Sweeney, Beatrice M., 122
 Swennen, C. Van de C. S., 960, 987
 Sydney harbour, 1031
 Sykes, G., 681
 Symbiosis, (defined), 391; 429, 1089, 1091
 in carnivores, 430
 in herbivores, 430
 origin of, 430
 and sponges, 1086
 Symbiotic hydroids (table), 392-394
 Symonds, Ralph F., 75
 Symonds, W. S., 989
Symphyllia, 619, 622
Synagoga mira, 426
Synaphobranchus, 650, 664, 666, 667
Synapta, 846
 digitata, 1195
 minuta, 1193
Synapticula reciprocans, 713
Synchaeta, 792, 793, 856
 baltica, 793
 fennica, 780
 monopus, 780, 792, 793
Syncoelidium pellucidum, 420
Syncoryne eximia, 374-375
Syndosmya, 477, 478, 803, 846, 847, 857
 alba, 488, 494, 495, 497, 845, 848
 community, 510
 communities, 510; figs., 509, 511

- fluctuations (fig.), 481
ovata, 713, 804, 807, 908
 community, 860
profundorum, 654
 Synecology, 9
Synedra acus, 851
pulchella, 782
tabulata, 782
 Syngnathidae, 144
Syngnathus, 899, 903
 abaster, 863
 anguineus, 945, 974, 989
 nigricollis, 843
 nigrolineatus, 861, 862
 caspius, 908
 typhla, 843
Synidotea laticauda, 708
macginitiei, 708
Syracosphaera carterae, 448
 Systema Naturae, 1152
 Systematic zoology, 5, 7
 Szidat, Lothar, 987
 Table Bay, fouling, 1028
 mortality, 984
Tachypleus gigas, 1172, 1173
 tridentatus, 1173
 Taenioida, 422
 Taganrog, Bay of, 854
Togelus plebius, 1143
 Tahiti, corals, 1092
 Tailliez P., 55
 Taimyr mortality, 988
 Tait, J., 338, 1157
 Takahashi, K., 1126
 Takahashi, S., 603, 604
 Takai, T., 151
 Takatsuki, S., 435
 Talavera, Florencio, 1141
Talitrus, 602
Talorchestia, 601
 brito, 846
 longicornis, 1157
 Tamar estuary, 685
 Tamura, T., 264, 1101
 Tanada, T., 121
 Tan Sin Hok, 261
 Tandy, G., 623, 728, 1101
 Tåning, Å. Vedel, 988
 Tanna Volcano mortality, 974
 Tanner, Z. L., 965, 980, 981
 Tansley, A. G., 33
Tapes (see also *Paphia*), 803, 847
 calverti, 805
 decussatus, 393, 1148
 pullastra, 498
 proclivis, 846
 rugatus, 847
 Tapes terrace, 808
Taphus hebes, 1121
Tanystylum orbiculare, 368
Tardigrada, 424, 1175
 Tarkhov, S., 818
Tarletonbeania crenularis, 988
 Taskin, George A., 894
 Tasmania, intertidal, 1018
 Tauber, A. F., 1156
 Tay, Firth of, fauna, 703
 Taylor, Clyde, C., 78
 Taylor, H. F., 984, 1209
 Taylor, Kenneth, M., 349, 1198
 Taylor, W. P., 173
 Taylor, Wm. Randolph, 711, 725, 727, 1048
 Taylor, T. G., 1096
 Tchernavin, V. V., 1207
Tealia lofotensis, 636
 Tebble, N., 1028
Tectus niloticus, 1041
Tegula, 1033
 funebralis, 550
 brunnea, 550
 Teichert, C., 258, 278, 281, 1135
 Teichmüller, R., 959
 Tekirghiol liman, 853
Telescopium, 624
 telescopium, 728
Telesio, 1105
 Television, underwater, 55
Tellina, 622, 623
 communities, 507
 distorta-*Tellina donacina* community, 508
 fabula, 497
 lilacina community, 508
 nitida, 805
 tenera community, 508
 tenuis, 497, 498, 594 (fig.), 601, 1145, 1148
 -*Tellina fabula* community, 507
 Tellinacea, 1149
Telmatogeton, 1182
Temora longicornis, 792, 793, 1165, 1166, 1168
Tenarea tortuosa, 1044
 Telosporidia, 418
 Temnocephalids, 420
 Temperate regions, growth in, 171
 Temperature, Aral Sea, 914
 and bryozoa, 1109
 in beaches, 588
 Baltic, 764
 Black Sea, 809-811
 carbonate solubility and, 251
 Caspian Sea, 894
 coefficients, 159
 compensations, 168
 and corals, 1088, 1099
 of deep sea, 647
 and deep-sea species, 669
 Temperature and distribution, 172-174, 369
 in estuaries, 684
 effect on bacteria, 1036, 1037, 1040
 gradients and structure, 178
 and growth and form, 174-176
 and mortality, 947
 N. Hemisphere, 89
 ocean, 88
 Oligocene, 379, 668
 optimum, 161
 and periodicity, 171-172
 and phytoplankton, 447
 and plankton, 451, 452
 patterns (fig.), 375
 ranges (fig.), 96, 160
 and reef distribution, 626
 regions, 362
 and reproduction, 168-171, 451

- Temperature, S. Hemisphere, 89
 and size, 175
 and structure, 176
 surface (fig.), 89
 tolerance, 947
 and tides (fig.), 569
 variations, 88
 Varna Lake (fig.), 851
 zonal types, 371
 and zonation, 568
 zones, characteristics, 362
- Temporary plankton, 450
- Temrjuk mortality, 983
- Teodoresco, E. C., 841
- Terebella lapidaria*, 494
nebulosa, 494
- Terebellides*, 848
eurysethus, 657
siroemi, 476, 777, 789, 790, 845, 847
- Terebra*, 595, 622
- Terebratalia obsoleta*, 1113
transversa, 636
caurina, 1114
- Terebratella inconspicua*, 1113, 1115
- Terebratula*, 266
- Terebratulina*, 1114
cavilei, 1113
- Terebripora*, 423
fisheri, 1031
orbigeriana, 1031
ramosa, 1031
- Teredo*, 482, 846, 1029, 1030
diegensis, 1030
niraflova, 1029
navalis, 1030, 1032
pedicellata, 1031
pulchella, 1032
utriculus, 1032
- Termier, Geneviève, 1015
- Termier, Henri, 1015
- Terminology, 17, 20, 47
 of beaches, 587
- Terpios fugax*, 352, 353
zeteki, 352, 353
- Tesch, P., 898
- Test, Avery Ransome (Grant), 1150
- Test net, 75
- Test squares, 9
- Tethya aurantia*, 636
- Tethys, 379
- Tetractinomyxon intermedium*, 419
- Tetrakenion synaptiae*, 424
- Tetracyllidea, 421
- Tetrarhynchoidea, 421
- Tetraspora explanata*, 853
- Texas coast, 171, 1024
 fishes, 149, 1207, 1209
 mortalities, 949, 978
- Thais* (see also *Purpura*)
emarginata, 550, 551
floridana, 421, 1032
lapillus, 421
- Thalamita*, 623
- Thalassema*, 655, 657
lankesteri, 1120
- Thalassia*, 552, 623, 724, 728
testudinum, 721, 1052, 1181
- Thalassina anomala*, 728
- Thalassinidea, 1155
- Thalassionema nitzschoides*, 830, 831, 832, 855
- Thalassomyia frauenfeldi*, 846
setosipennis, 1182
- Thalassiosira baltica*, 782, 792
nana, 855
- Thaliacea, 1201
- Thamdrup, H. M., 63, 64, 498, 505, 523, 722, 723, 732
- Thanatocoenosis, 40
- Tharyx multifilis*, 657
- Thau Lagoon, 730
- Théel, HJ., 377, 1195
- Thelepus cincinnatus*, 494
- Thelohania maenadis*, 419
- Théodoridès, Jean, 1051
- Theodoxus fluviatilis*, 779, 780, 783, 790
litoralis, 779
- Thermal death point, 163
- Thermocline, Black Sea, 811
- Thermosphere, 21, 641
- Thiel, M. E., 1101
- Thiele, Johannes, 1148
- Thiemann, Karl, 957
- Thienemann, A., 42, 477, 491, 786, 787, 1181
- Thigmatricha, 419
- Thomas, B. D., 185, 209, 212, 229, 230
- Thomas, H. G., 79
- Thompson, D. Q., 1221
- Thompson, D'Arcy W., 377
- Thompson, E. F., 194, 223
- Thompson, Harold, 1201
- Thompson, J. Vaughan, 1
- Thompson, T. G., 185, 187, 209, 212, 229, 230, 231, 262, 263, 264, 265, 266, 268, 269, 270, 315, 446, 692
- Thompson, S. H., 174, 498, 1148
- Thompson, Sarah J., 1147
- Thompson, W. F., 919
- Thomsen, H., 211, 224, 226, 316, 317, 318, 320, 330, 331, 332
- Thomson, C. Wyville, 2, 185
- Thomson, J. Arthur, 1107, 1115
- Thoracida, 425
- Thoracophelia*, 594
 biomass, 386
 cycling of beach sand, 386
furcifera, 1121
macronata, 385, 592, 601, 1125
yasudai, 1125
- Thoracaster*, 658
- Thorne, R. F., 728, 1057
- Thorp, E. M., 257, 260, 285, 1066
- Thorp, Frank, 958
- Thorpe, W. H., 1177, 1181
- Thorson, Gunnar, 61, 64, 68, 69, 165, 167, 168, 169, 170, 178, 359, 452, 461, 466, 472, 475, 477, 480, 483, 487, 488, 496, 497, 498, 501, 504, 505, 508, 515, 517, 518, 522, 536, 1021, 1123
- Thorson's Christmas cards (fig.), 403
- Thracia papyracea*, 495, 805
- Thraikill, J. R., 60
- Thulin, G., 1126
- Thunnus*, 866
- Thyca*, 424
- Thynnus vulgaris*, 423
- Thysanote pomacanthi*, 425
- Tiara pileata*, 783
- Tibicen veridifascia*, 1180

- Tichonenko, A., 825
- Tidal belts, 677
 bore, 681
 channels, 678
 currents, 683
 flats, 677, 718
 inequalities, 551
 inlets, 676
 marshes, 724, 726
 types and zonation, 550
 rhythm, 921
 variations, 544-545
 velocity and zonation, 567
- Tide curves (fig.), 544
 factors, 559
 Sitka, Alaska (fig.), 558
- Tidepools, 570, 572
 eroded by snails, 576
 fauna of, 575
 pH in, 572, 573
- Tides, 100, 543
 in estuaries, 679
 San Francisco (fig.), 556, 557, 559
 and temperature (fig.), 569
 types of (chart), facing 535
 and upstream dispersal, 679
 and zonation (fig.), 545, 546
- Tierney, J. Q., 1031
- Tigriopus*, 572
- Tilden, J. E., 951, 953, 958
- Tilefish disaster, 949, 979
- Timm, Richard W., 1118
- Timmermann, E., 251, 255, 265, 445
- Tinbergen, L., 1148
- Tintinnopsis*, 793
brandii, 780, 793
campanula, 833
fuscus, 792
meneri, 856
parvula, 856
tubulosa, 780, 793, 833, 856
ventricosa, 833, 834
- Tintinnum mediterranea*, 833, 834
subulatus, 833
- Tisbe dilatata*, 845
- Tischler, W., 468, 469, 470, 473, 474, 504
- Titanium, in diatoms, 351
 in red tides, 352
- Tivola stultorum*, 393, 395, 498, 592, 594, 597
 fluctuations, 937, 938
- Tizard, T. H., 1141
- Toads, 1211
- Tobago mortality, 989
- Tochocheres cylindraceus*, 425
- Todd, R. A., 730
- Tokara Islands, 1022
- Tokioka, Takasi, 1022, 1066
- Tokita, Shun, 1048
- Tolypella nidifica*, 782
- Tolypothrix*, 1048
- Tomales Bay (Calif.), 700
 communities (fig.), 719
- Tomazo, G. I., 865
- Tomlinson, Jack T., 1033
- Tomopteris helgolandica*, 1122
kefersteini, 1122
planktonis, 1122
septentrionalis, 1122
- Torre-Bueno, J. R. de la, 1177, 1181
- Torrey, H. B., 393, 981
- Tortonese, Enrico, 713, 977, 1190
- Tortugas, corals, 1103
 Foraminifera, 1076
 reefs, 1090, 1098
- Torula*, 1037
- Tournefortia*, 1052
- Towler, E. D., 485, 505
- Townes, H. K., Jr., 1173
- Townsend, R. C., 629
- Toyama Bay, Foraminifera, 1077
 Molluscs, 1146
- Trace metals, 345
- Tracey, J. I., 260, 261, 262, 263, 264, 271, 273, 275, 276,
 285, 576, 618, 629, 1097, 1101
- Trachurus*, 867
mediterraneus, 866-867
- Trachylina, 420
- Trades, Northeast, 90
 Southeast, 90
- Trailside dominance, 562
- Traité de Zoologie, 1069
- Transeau, E. N., 1057
- Transition to land, 603
- Transition zones, 42
- Transmission (tables), 115, 117, 118
- Transmission, coastal water, 117-118
- Transmission, ocean water, 115-117
- Transparency, blue and green light, 116
 coastal water, 116
 oceanic water, 116
- Transparency meter, 110
- Traps, 79
- Trask, Parker D., 215, 216, 730, 731
- Trautman, M. B., 1204
- Travisia*, 655, 657, 665
profundi, 657
- Trawls, 73-78
- Treadwell, A. L., 930, 931
- Trebis tenuifurcatus*, 425
- Trefletti, Francesco, 974
- Trégouboff, G., 1072
- Trematoda, 420
- Trenches, fauna of, 666; table, 656-661
- Tressler, D. K., 938
- Tressler, W. L., 688, 690, 1161, 1162, 1163
- Tretomphalus*, 1079
- Trevarthen, C. B., 541, 547, 550, 552, 553
- Triaenodon obesus*, facing 621
- Triarthra longisetosa*, 856
- Tricellaria occidentalis*, 1028
- Trichechus latirostris*, 979
- Trichiuroidea, 423
- Trichocorixa*, 1177
blackburni, 1182
verticalis, 1180
wallengreni, 1180
- Trichodesmium*, 956
erythraeum, 982, 986
- Trichodina sphaeroides*, 419
- Trichocladius viripennis*, 846
- Trichostomata, 419
- Tricladida, 420
- Tridachia crispata*, 432

- Tridacna*, 280, 432, 622, 624, 628
crocea, 437, 618, 1033; fig., 434
gigas, 268, 619; facing 621
squamosus, 623
 Tridacnidae, 433, 434, 1149
Tridochin maritima, 1057
Trillotia erinaceus, 421
 Tripiea, 1069, 1070
Tripneustes esculentus, 419
 Tristan da Cunha, algae, 1041
Triticum junceum, 1057
Trilurus helveticus, 1211
palmatus, 1211
vulgaris, 1211
 Trivandrum, India, plankton, 1020
Trochopus, 1178
marinus, 1178
Trochostoma, 654
Trochus, 615, 620, 623, 803, 846
Troglophaeus, 846
 Trombidiformes, 1176
Trophon breviatus, 848
Trophonia, 418
affinis-Venericardia borealis community, 520
Trophonopsis, 848
 Trophic levels, 36
 Trophic relationships, 34
 Black Sea, 871
Tropidoneis vitrae, 1059
Tropidonotus natrix, 1213
Tropiomeltra carinata, 1184
 Troposphere, 21
 in Black Sea, 810
 Troughs, in beaches, 589-590
 Trout eggs, 141
 Trudy Instituta Okeanologija, 1011
 Trueman, E. R., 266, 1148
 Truesdale, G. A., 186
 Trusheim, Ferdinand, 1159
 Try net, 75
 Trypanorhyncha, 421
Trypanosoma giganteum, 418
granulosum, 418
rajae, 418
Trypetesa lateralis, 1033
 Tsalkin, V. I., 868, 869
 Tschermak, G., 258
 Tseu, W. S. L., 576
 Tsientang River, bore, 681
 Tsubata, Fumitaka, 1066
Tubastrea, 615, 1093
Tubipora, 618, 628, 1094
 Tucker, G. H., 454
 Tullgren, A., 73
 Tully, J. P., 187, 680, 689
 Tuna fishery, 1209
 Tundra drainage, 338
 Tunicata, 1201
 Tunis mortality, 986
Turbanella hyalina community, 791
 Turbellaria, 420, 1119
 Baltic, 791
 Turbidity, in estuaries, 690
 and zonation, 566
Turbinaria, 615, 624; facing 620
Turbo, 615, 1029
 Turbulence, 447
 and nutrients, 300
 Turekian, Karl, 263, 355
 Turner, H. J., 484, 590
 Turner, Ruth D., 1030, 1033
 Turnover, (defined), 491
 Turpaeva, E. P., 30
Turritella, 472, 803
 and *Cerithium* communities, 514
communis, 477, 495
Tursiops truncatus, 868
 Turtle grass, 721, 724
 Turtles, 603, 1217
Tuscarettia, 643
 Tuscarora-zone, 1070
Tussilago farfara, 1057
 Tüxen, Reinhold, 1057
 Tyärminne, 730, 1026
 Twenhofel, W., 20, 245, 683, 686, 729, 734
 Tydeman, M.-G. F., 1107
Tylocephalum, 421
pingue, 421
Typhlogobius, 409
Typhlonus, 667
Uca, 721, 1156
minax, 147, 1155
pugillator, 1157
pugnax, 1157
 Uchida, T., 392
Ucides, 721, 1156
cordatus, 1156
Udonella, 421
Udotea, 261
 Ullyott, P., 808, 817, 819, 833
 Ullyott hypothesis, 820
Ulothrix flacca, 1044, 1048
 Ulrich, W., 1159
 Ultrahaline, 25
Ulva, 846, 1048
 association, 1047
lactuca, 125, 839, 1017
Umbellula, 652
 Umbgrove, J. H., 623, 1102
 Umbrophiles, 125
 Underway bottom sampler, 69
Undinula vulgaris, 1167
Unicapsula muscularis, 419
 Uniform oxygen layer, 189
Unio, 779
 United States Bureau of Fisheries, 7
 Fish Commission, 3, 4
 Fish and Wildlife Service, 227
 Union List of Serials, 872
 Unionidae, 424
 Unny, M. Mukundan, 951, 957, 986
 Upgrowth, (defined), 499
 Uphof, J. C. T., 718, 726, 727
 Uphof, J. E., 1058
Upogebia, 395, 396, 721, 848, 849, 853
 commensals (fig.), 397
littoralis, 847, 987
 -*Melinna palmata* community, 520
 Upper neritic, 19
 Upwelling, 97, 299, 301, 366, 370, 447, 956, 970
 on California coast, 298
 and nutrients, 298, 299

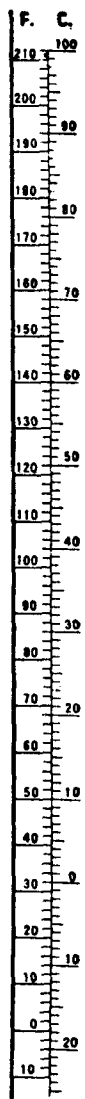
- Urea-fermenting bacteria, 1040
- Urechis*, 482, 1025
caupo, 396, 1120
 commensals (fig.) 396, 397
- Urey, H. C., 245
- Urmia Lake mortality, 977
- Urnatella*, 423
- Urosalpinx*, 1144
cinerea, 421, 1145, 1147
- Urospora*, 418
mirabilis, 1048
- Ursin, E., 63, 65, 67, 509
- Usachev, P. I., 830, 855, 856, 871, 1066
- Ushakov, P., 505, 508, 555, 560, 567-568, 680, 685, 720, 947
- Usinger, R. L., 1177, 1181
- Utinomi, Huzio, (formerly, Hiro, Fugio), 1033, 1090
- Utterback, C. L., 110, 116
- Utricularia neglecta*, 780
- Uvarov, B. P., 166
- Uzunlar stage, 804
- Vaccaro, R. F., 80, 192
- Vachon, Max, 1176
- Vahlkampffia patuxent*, 418
- Vaillant, L., 435
- Valente, D., 141
- Valentin, H., 25
- Välikangas, I., 24, 763, 767
- Valkanov, A., 850, 851
- Vallacerta*, 1073
- Vallin, S., 758, 767, 794
- Valonia*, 140
- Valparaiso mortality, 976
- Valparaiso Bay, plankton, 1022
- Valvifera, 426
- Van, Lake, mortality, 977
- Vanadis*, 1121
- Vanadium, 1199
- Vanadium in tunicates, 349, 1198
- Vanadium uptake, 350
- Vanadocytes, 1199
- Van Dam, L., 230
- Van Name, Willard Gibbs, 1199
- van't Hoff's rule, 159, 451
- Van Veen, J., 678, 730
- van Veen grab, 64
- Vampyroteuthis*, 369
infernalis, 1147; facing 650
- Varna Bay, 691
 bottom communities in, 850
 mortality, 987
 phytoplankton, 832
 salinity, 818
- Varna Lake, 851
 bottom associations in, 852
 hydrography, 851
 oxygen, 851
 profile, 852
 salinity, 850, 851
- Vartiovaara, Unto, 1040
- Vaterite, 250
- Vatova, A., 8, 64, 169, 467, 470, 471, 478, 507, 508, 509, 510, 512, 520, 949, 978
- Vaucheriae, 1042
- Vaughan, Thomas Wayland, 9, 10, 186, 212, 257, 264, 364, 1102
- Vaux, D., 301, 453
- Vegetation of Baltic, 788
- Vegetation, marsh (fig.), 725
- Velasquez, Gregorio T., 1049
- Venema, G. F., 977
- Venerupis*, 803
- Venice, lagoon, 1023
- Venezuela Basin, oxygen, 220
- Venezuela mortality, 984
- Venus* (see also *Mercenaria*), 472, 477, 803
 community, 485, 508; (fig.), 509
-Corbula biocoenosis, 861
fasciatum-Spisula-elliptica-Branchiostoma community, 509
fluctuosa community, 508
gallina, 495, 846, 847, 848
 community, 508
mercenaria, 169, 281, 1147
ovata, 494
striatula, 987
verrucosa, 805
 community, 509
- Venus (journal), 1143
- Vera Cruz mortality, 985
- Verbeek, Reinier, 974
- Vercelli, Francesco, 223
- Verco, J. C., 1141
- Verduin, Jacob., 35
- Vergara, Z., 1130
- Verjbinskaya, N., 192, 313, 319
- Vermetus*, 1149
- Vermilia*, 847
- Vernon, H. M., 560
- Verrill, A. E., 4, 5, 7, 165, 402, 968, 978, 979, 1103
- Verrucaria*, 1048
maura, 1045
- Versluys, J., 1107
- Vertebrate accumulations, 969
- Vertebrate blood and sea water, 143
- Vertebrate remains, abundance of, 968
 and castastrophes, 967
- Vertebrates, origin of, 145-146
- Vertical circulation, 93, 446
- Vertical convection, 301
- Vertical displacement in canyons, 638
- Vertical distribution, 537
- Vertical migration, 454
- Vertical migrations, Caspian Sea, 902
 copepods, 1166
- Vertical mixing, 301
- Vertical transport, 447
- Vervoort, W., 1168
- Verwey, J., 403, 437, 472, 683, 721, 722, 724, 968, 1022, 1102, 1103, 1148, 1157
- Vesuvius mortality, 974
- Vevers, H. G., 69, 486
- Vibe, Chr., 64, 498, 505, 517
- Vibrio desulfuricans*, 986
- Victorella pavid*, 781, 782, 1110
- Victoria, zonation, 1016
- Vilela, H., 507, 508, 1148
- Villaluz, D. K., 1133
- Vimbra*, 867, 868
- Vine, A. C., 56, 69
- Vinogradov, A. P., 261, 274
- Viosca, P., 151
- Virgularia mirabilis*, 841

- Viscosity, 448
 Visher, Stephen S., 1022
 Viswanathan, R., 138
 Vizcaino Bay, upwelling, 1044
 Vlès, F., 265
 Vodyanitsky, V. A., 817, 826, 840, 865, 868, 869, 870, 871
 Voeltzkow, A., 257
 Vogt, Carl, 3
 Vogt, Wm., 1221
 Volga basin, 900
 Volga River, 891
 Volga Delta, 729
 Volkov, L. I., 840
 Volterra, V., 42
Volva, 622
 Volz, Peter, 1033
 van Voorthuysen, J. H., 1080
 Vorob'ev, V. P., 713, 857, 858, 859
 Voroshilova, A., 1039
 Vorstman, A. G., 787
 Vosmaer, G. C. J., 1085
 Vorticellids, 395
 Wachner, H., 819, 828
 Wadden Sea, 1026
 Wadden skimmer, 73
 Waddens, 721; facing 673, 724
 DeWaele, A., 266
 Wærn, M., 751, 765, 767, 774, 779, 788
 Wagler, E., 1179
 Wagner, H., 1158
 Wahlenberg, G., 1, 538
 Waikiya, Y., 1133
 Wakasa Bay, Foraminifera, 1078
 Wake Stream, 447
 Waksman, Selman A., 194, 306, 309, 1037, 1039, 1066
 Wald, G., 140, 142
 Waldichuck, M., 101
 Walker, B. W., 919
 Walker, F. T., 566, 1049
 Walker, S. T., 984
 Walrus feeding, 498
 Walsh, G. B., 1181
 Walters, V., 167, 522
 Walther, Johannes, 10, 20, 132, 941, 942, 974, 980, 986, 1103
 Walton, C. L., 568, 707, 728, 1013
 Walton, William R., 1079, 1081
 Walvis Bay, 954, 955, 956, 959, 970
 mortality, 955, 983; (fig.), 954
 Wanless, H. R., 734
 Wardle, Robert., 422
 Warfel, H. E., 78, 1086, 1208, 1209
 Warmwassersphäre, 641
 Warren, E., 394
 Warming, E., 7, 115, 174, 177
 Wassink, E. L., 121, 122
 Wasteneys, Hardolph, 144, 167
 Water currents and plankton, 451
 Water level, in Baltic, 767
 Water movement, and corals, 1087
 Water, properties (fig.), 132
 Water surface, albedo of, 113
 Water table in beaches, 588
 Water transparency, 109
 Water vapor exchange, 93
 Waterbloom, 951
 Waterman, T. H., 453, 1173
 Waters, A. W., 1111
 Watkin, E. E., 1022
 Watson, A. T., 1126
 Wattenberg, Herman, 186, 189, 198, 208, 214, 218, 219, 220, 222, 223, 251, 252, 254, 255, 265, 320, 753, 757, 792
 Wave action and zonation, 546, 565-566
 Wave lengths of light, colors, 109
 Waves in estuaries, 681
 Webb, D. A., 1199
 Weber, Alois, 1141
 Weber, Max, 1086
 Weber van Bosse, A., 279, 1086
 Weddell Sea, oxygen, 216, 217
 Radiolaria, 1071
 Weed, A. C., 717
 Weese, A. O., 514
 Weigelt, Johannes, 941, 942, 943, 945, 946, 960, 967, 974, 980, 984
 Weighing, procedure, 492
 Weil, E., 137
 Weiler, Wilhelm, 942, 971, 989
 Weiss, C. M., 566, 567
 Welander, P., 249
 Welch, Paul S., 53, 54, 73, 928
 Weldon, W. F. R., 1152
 Wellington, New Zealand, fouling, 1028
 Wells, G. P., 150, 1127
 Wells, J. W., 285, 609, 611, 1087, 1097, 1103
 Welsh, M., 437
 Welsh, W. W., 960, 979, 1206
 Wembury, intertidal, 1019, 1020
 Wentworth, C. K., 278
 Werth, E., 1103
 Werner, Franz., 1212
 Wesenberg-Lund, C., 176, 1182
 Wesenberg-Lund, E., 1120, 1127
 West Africa, corals, 1101
 polychaetes, 1122
 West Indies, algae, 1042
 echinoderms, 1188
 Westerlies, 90
 Western Atlantic, convergences, 321
 Western North Atlantic, nutrients, 320
 Western Pacific, 335
 Wet: dry weight ratios, 493
 Wet weights, 492
 Weymouth, F. W., 151, 170, 174, 498, 601, 1148, 1156
 Whales, migration routes of, 1223
 Wharton, G. W., 166, 593, 595, 596, 599, 1132, 1177
 Wharton, W. J. L., 281, 818
 Whedon, W. Forest, 953, 1028
 Wheeler, J. F. G., 61, 1119
 Wheeler, W. C., 261, 262, 264, 269, 273, 354
 Whipple, Melville C., 186, 187,
 White, David, 1058
 White, F. B., 1182
 White Sea, copepods, 1165
 White zone, 548
 Whitelegge, Thomas, 982
 Whiteman, A. J., 257, 628, 1100
 Whiteway, S. G., 302
 Whitley, G. P., 973, 1204
 Whitmore, Frank, C., Jr., 1223
 Whitney, David D., 700
 Whitten, H. L., 568
 Whyte, E. F., 982

- Wiborg, K. F., 60, 1168
 Widrig, T. M., 1210
 Wieser, W., 1118
 Wigglesworth, V. B., 150, 1182
 Wikgren, Bo-Jungar, 1022
 Wikholm, Donald, 953
 Wilbur, K. M., 266, 267, 1133
 Wilby, G. V., 1203, 1206
 Wilhelm, G. Ottmar, 981
 Willcox, Norman Richard, 965, 979
 Wille, N., 958
 Willer, A., 1014
 Willey, Arthur, 1141
 WILLIAM SCORESBY, 225, 226, 230, 955, 959
 Williams, A., 257, 266
 Williams, A. E., 1049
 Williams, F. T., 259
 Williams, F. X., 1182
 Williams, G., 1159
 Williams, L. G., 1020, 1049
 Williams, R. H., 953, 984
 Williams, R. J. P., 348
 Williams, R. W., 449
 Williams, W. W., 590
 Williamson, E. D., 250, 255
 Willm, Pierre, 54, 650
 Wilson, C. B., 596
 Wilson, Douglas P., 407, 473, 482, 483, 484, 536, 558, 1015, 1127
 Wilson, M. S., 1152
 Wiman, C., 946
 Wimpenny, R. W., 175, 178, 179, 958, 1067
 Winckworth, R., 497
 Windsystems, 90
 Windward Passage, 220
 Windward lagoon reefs, 622-623
 Windward reefs, 614-619; facing 620
 Winds, schematic (fig.), 91, 95
 Wingfield, C. A., 168
 Winkler method, 230, 231
 Winsor, C. P., 58
 Winter, Howard A., 1026
 Winther, P., 403, 655, 662
 Wintsell, J., 489
 Wirth, H. E., 305, 308, 309
 Wirth, W. W., 1181, 1182
 Wirzowski, A., 509, 512
 Wiseman, J. D. H., 1067, 1081
 Wismer, N. M., 505
 Wissemann, W., 815
 Witting, R., 753, 758
 Wohlenberg, E., 505, 523, 722
 Wojtusziak, R. J., 1050
 Wolcott, R. H., 424
 Wollaston method, 68
 Wollin, Goesta, 1077
 Wollin, Janet, 1077
 Woloszynska, J., 957
 Womersley, H., 1182
 Womersley, H. B. S., 373, 376, 539, 542, 547, 549, 550, 551, 552, 553, 1050
 Wood, Albert Elmer, 1148
 Wood, E. J. Ferguson, 728, 733, 1027, 1028, 1040
 Wood, Horace Elmer 2nd., 1148
 Wood, R. D., 572, 707, 1050
 Woodbridge, Helen, 1199
 Woodford, A. O., 633
 Wood-Jones, F., 613, 1096, 1215
 Woods Hole Marine Biological Laboratory, 5
 Woodward, S. P., 360
 Woodward's index, 362
 Woodworth, W. McM., 925
 Woolard, G. P., 56
 Wooster, Warren S., 212, 225, 232
 Wooten, William A., 987
 World List of Scientific Periodicals, 872
 World Fisheries Abstracts, 1205
 Worm reefs, 1126
 Worms, 1117
 Worthington, L. V., 201
 Worzel, J. L., 56, 69
 Woudstra, H. W., 974
 Wrack fauna, 1175
 Wrangel, F., 808, 815
 Wray, J., 255, 273
 Wright, Edward Perceval, 1107
 Wright, Mike, 1182
 Wright, M. A., 148
 Würm glacial, 805
 Wüst, Georg, 88-90, 91, 92, 196, 202, 208, 221, 222, 641
 Wynne-Edwards, V. C., 1221
 Wyville Thomson Ridge, 221, 316
Xantho rivulosus, 846
 Xanthophylls, 121
Xenophthalmus pinnotheroides community, 518
Xenopus laevis, 1212
 Xiphosura, 1171-1173
Xyne grex, 970
 layer, 966
Xenia, 433, 620, 624
Xenobalanus globicipitis, 426
Xenocoeloma brumpti, 425
Xenophthalmus, 477
Xiphias, 404
Xylophaga dorsalis, 1032
 Yeasts, 1035, 1037
 Yakubova, L. I., 840, 845
 Yellow substance, 116, 117
 in rivers, 116
 Yoldia Sea, 769, 770
 Yamaguchi, Y., 974
 Yamamoto, Gotaro, 67, 146, 170, 504, 515
 Yamanouti, T., 1195
 Yamazi, I., 689, 1066
 Yañez, A. P., 1022, 1221
 Yashnov, V. A., 1169
 Yosanaikai Lagoon, 688
 Yasuda, J., 679
 Yasuo, Ohsima, 1029
 Yatsu, Naohide, 976
 Yendo, K., 557, 571
 Yokota, Toru, 151
 Yokoya, Yu., 1157
Yoldia arctica, 769
 hyperborea community, 518
 Yonge, C. M., 3, 30, 64, 149, 170, 266, 401, 429, 430, 432, 433, 434, 435, 436, 437, 438, 439, 440, 456, 482, 555, 558, 594, 626, 686, 698, 728, 1013, 1015, 1033, 1103, 1143, 1148, 1156
 York, H. H., 538, 1055
 Yoseph, R. S., 230
 Yoshimura, S., 731
 Yttrium, in algae, 349
 Young, J. Z., 1204

- Young, R. T., 141
 Yuasa, H., 1182
 Yucatan Channel, 220
 Yucatan mortality, 985
 Zachs, I., 505, 508, 552, 555, 560, 567-568, 680, 685, 720, 947
Zonardinula, 552, 573
 Zangerl, Rainer, 1213, 1217
Zannichellia, 789
 palustris, 857
 pedunculata, 780, 782
 repens, 780
 Zanon, Vito, 958
 Zanzibar, Bryozoa, 1111
 coral reefs, 1092
 Zapfe, H., 1156
 Zascher, G., 865
 Zechmeister, L., 963
Zeitschrift für Morphologie und Oekologie der Tiere, 1143
Zelinkiella synaptae, 422
 Zelfzko, J. V., 976
 Zeller, E. J., 255, 273
 Zenkevich, L. A., 8, 20, 21, 35, 64, 66, 360, 361, 370, 380, 467, 489, 491, 493, 501, 503, 505, 514, 515, 517, 518, 541, 645, 654, 666, 801, 802, 803, 821, 830, 831, 833, 834, 837, 838, 839, 840, 841, 847, 854, 855, 856, 857, 858, 859, 860, 867, 891, 915, 947, 957, 959, 986, 1015
 Zenkovich, V. P., 25, 590, 591
 Zernov, S. A., 8, 509, 711, 713, 840, 844, 845, 846, 847, 848, 849, 868
 Zero of life, 2
 Zeuthen, E., 487
 Zinc, in algae, 353
 Zinn, D. J., 596
 Zinova, E., 839
 Zirconium, in red tides, 352
Zirphaea, 1029
 Zoanthidea, 420
 ZoBell, Claude E., 185, 194, 208, 212, 213, 260, 305, 306, 309, 385, 456, 503, 593, 647, 649, 650, 690, 710, 711, 732, 733, 962, 1016, 1035, 1037, 1039, 1040
 Zonal distribution (fig.), 371
 Zonal features of estuaries (fig.), 674
 Zonal typology (fig.), 371
Zonaria variegatus, 1017
 Zonation, algal, 125, 1043
 Auckland, N. Z. (fig.), 554
 in Baltic, 767
 and barnacles, 566-567
 causes, 543, 555
 of crabs (fig.), 722
 deep sea, 641, 642
 estuarine (fig.), 674
 and exposure, 556-557
 gradient (fig.), 561
 hypotheses, 560-563
 and inclination of substrate, 566
 and light penetration, 565
 on marshes, 727
 oxygen and, 566
 Pacific Grove, 551
 Port Aransas, Texas (fig.), 565
 and salinity, 568
 in sand, 599
 schemes, 546
 shore, 8
 and temperature, 568
 and tides (figs.), 545, 546; 557, 567
 turbidity and, 566
 universal (fig.), 548
 universal scheme, 547
 variation of, 552-553
 and wave action, 556, 565-566
 West Indies, 1043
 Zone néritique, 19
 Zones, barren, 562
 and exposure, S. Africa (fig.), 563
 indicators, 541
 intertidal, 538
 temperature (fig.), 364
 terminology, 542, 547
 Zoobenthos, Black Sea, 841-845
 Caspian Sea, 903
 Sea of Azov 858
Zoochlorellae, 429, 1199
Zooganoides laevis, 421
Zooganus rubellus, 421
Zoogonidae, 421
Zoological Record, 1011, 1143
Zoomastigina, 418
Zooplankton, 449-455
 Aral Sea, 914
 of Baltic, 792-794
 Bermuda, 1153
 Black Sea, 832-839
 Caspian Sea, 901
 Georges Bank, 1168
 Gulf of Maine (fig.), 314
 Norwegian Sea, 1167
 in Novorossiisk Bay (fig.), 834
 Pacific, 1167
 Sea of Azov, 856
Zoorema, 4
Zoothamnium, 395
Zostera, 552, 707, 721, 724, 725, 847, 848, 849, 899, 902, 908, 914, 1053
 associations, 1047
 marina, 168, 417, 418, 637, 761, 788, 789, 840, 857, 1052, 1053, 1057
 meadows, 853
 nana, 840, 857, 1052
Zooxanthellae, 418, 429, 430, 431, 1087, 1089, 1094, 1096, 1101, 1199
 and excretion, 439
 in Foraminifera, 1079
 of Radiolaria, 1071
Zostera Meadows, Black Sea, 847
Zostera Zone, Black Sea, 847
Zuider Zee, 722
Zuider Zee Commission, 722
Zwartkops River, 946
 INDEX COMPLETED NOVEMBER, 23, 1957, DILLON BEACH, CALIFORNIA.

CONVERSION TABLE



<i>Nautical Miles</i>	<i>Kilometers</i>
1	1.8
2	3.7
3	5.6
4	7.3
5	9.2
6	11.1
7	13.0
8	14.8
9	16.7
10	18.5
20	37.0
30	55.5
40	74.1
50	92.5
60	111.2
70	129.6
80	148.0
90	166.7
100	185.1
200	370.0
300	556.0
400	741.0
500	916.0

<i>Feet</i>	<i>Meters</i>	<i>Fathoms</i>
1	0.31	0.16
2	0.61	0.33
3	0.91	0.50
4	1.22	0.67
5	1.51	0.82
6	1.83	1.00
7	2.14	1.16
8	2.44	1.33
9	2.74	1.50
10	3.05	1.66
20	6.10	3.33
30	9.14	5.00
40	12.19	6.66
50	15.24	8.23
60	18.29	10.00
70	21.34	11.66
80	24.38	13.33
90	27.43	15.00
100	30.48	16.66
200	60.96	33.33
300	91.44	50.00
400	121.92	66.66
500	152.40	83.33
600	182.88	100.00

<i>Statute Miles</i>	<i>Kilometers</i>
1	1.6
2	3.2
3	4.8
4	6.4
5	8.1
6	9.7
7	11.3
8	12.9
9	14.5
10	16.1
20	32.2
30	48.3
40	64.4
50	80.5
60	96.6
70	112.7
80	128.8
90	144.8
100	160.9
200	321.9
300	482.8
400	643.7
500	804.7

<i>Kilometers</i>	<i>Nautical Miles</i>	<i>Statute Miles</i>
1	0.5	0.6
2	1.1	1.2
3	1.6	1.9
4	2.2	2.5
5	2.7	3.1
6	3.2	3.7
7	3.8	4.4
8	4.3	5.0
9	4.9	5.6
10	5.4	6.2
20	10.8	12.0
30	16.2	18.6
40	21.6	24.9
50	27.0	31.1
60	32.4	37.3
70	37.8	43.5
80	43.2	49.7
90	48.6	55.9
100	54.0	62.1
200	107.9	124.3
300	161.9	186.4
400	215.9	249.0
500	269.9	310.7