

Accidentally misinterpreted: many references, etc.

Page-references often wrong - to former page, fig. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

No good method of reference to the Plates.

INDEX.

	Page.
Anlmutter	217
Abalones	700
Ablott, Dr. C. C., on common Seals	55, 56
habits of the Cray-fishes	814, 810
spawning and feeding habits of White Perch	432, 430
<i>Abeona sarora</i>	278
<i>minima</i>	276, 278
Aberdeen fish	200
<i>Acantharchus pomotis</i>	405
Acanthuridae	279
<i>Acanthurus caeruleus</i>	279
<i>nigricans</i>	279
Achigau	401
<i>Achirus lineatus</i>	177
<i>Acipenser brevirostris</i>	659
<i>medirostris</i>	667
<i>oxyrhynchus</i>	659
<i>sturio</i>	659
<i>transmontanus</i>	667
Acipenseridae	660
<i>Acrochilus alutacens</i>	613
<i>Actinophrys sol</i>	734
Acaña, Christopher, on the Peggelney	120
products of the Pece-Buey	128
Adams, Prof. A. L., on the habits of the Togue ..	493
Admete Couthouy	603
Aesche	506
African Pompano	327
distribution of	329
<i>Agaphelus gibbosus</i>	31
<i>Agaricia agaricitea</i>	841
Agassiz on breeding of Green Turtles	151
breeding seasons and habits of Snapping Turtles	153
range of Soft-shell Turtles	152
rate of growth of Loggerhead Turtle	148
Aglektok	62
Agonidae	257
Agonus family	257
<i>Agunglia imperiale</i>	358
Aguja	337
Blanca	337
de Palada	337
Prieta	337
Voladora	337
de Costa	337
Agulha	337
Agulhao	337
Alaska Pollack	232
Smelt	544

	Page.
Albicare	320, 322
<i>Albula vulpes</i>	612
Albulidae	612
Aleby-trout	236
Alepidosauridae	547
<i>Alepidosaurus borealis</i>	547
<i>ferox</i>	548
<i>Alepocephalus Agassizii</i>	548
<i>Bairdii</i>	548
family	548
Alewife	569, 576, 580
abundance of	582, 580
food of	586
former abundance of	583, 584
geographical distribution of	584, 585
history and nomenclature of	579-582
migrations and movements of	585
occurrence of, in New England	580, 581
reproduction of	586
size of	587
uses of	587
Bay	569
Branch	588
Inland	594
Alfione	277
Allen on Fur Seal pups	93
reproduction of Fur Seal	106
Seals and Walrus	33
swimming of Fur Seal	102
Alligator	141
abundance of	142
economical value of	146
the fishery of	146
food and manner of obtaining it	142
geographical distribution of	141
hibernation of	145
mode of capture of	146
mode of life of	144
origin of name of	141
pugnacity of	143
size of	142
voice of	145
Alligator Gar	667
Snapper	153
Turtle	153
Allman, Professor, on habits of the Bering Amphipod	825, 826
<i>Alopias vulpes</i>	676
<i>Alosa cyanonoton</i>	579
<i>tyrannus</i>	579
<i>Alutera Schoepfli</i>	171
<i>Amanropsis islandica</i>	693

Alepocephalidae
.. 5-4

672, 676

	Page.		Page.
Amber-fish	331	Arctic Sea-cow	128
fishes and Leather-jackets	331, 332	extinction of, in historical times	128-129
Ambloplites rupestris	404	Arctocephalus	37
American Leech	834	californianus	52, 53
Lobster	781	montericus	52, 53
Soles	175	ursinus	52
Amia calva	658	Arenicola marina	833
Amiidae	658	Argina pexata	703
Aminurus	626	Aromochelys odorata	154
nebulosus	627	Arledi on different forms of Ostracion	171
Ammodytes lanceolatus	244	Artedius fenestralis	259
tobianus	248	lateralis	259
Ampelisca, sp., found in stomach of Sea-robin	256	megacephalus	259
Amphibians	159-162	notospilotus	259
Amphibious Carnivora	33	pugettensis	259
Amphioxus	681	seriatus	259
Amphipod, Boring	825, 826	Ascelichthys rhodorus	259
Amphipoda	824-826	Ashby, Captain, on distribution of Halibut	193
Amphisphyra debilis	694	food of Halibut	195
hiemalis	694	Halibut Spawn	196
Amphistichus argentens	278	migrations of Halibut	194
Amyda	152	spawning of Mackerel	295
mutica	152	Aspidonectes asper	152
Anachis	596	Emoryi	152
Anarrhichas lepturus	249	nuchalis	152
lupus	248, 249	spinifer	152
minor	249	Aspidophoroides inermis	258
Anarrhichadidae	248	monopterygius	257, 258
Anarrichthys ocellatus	250	Astacus	812
Anchovas	544	leptodaotylus	812
Anchovies	611, 612	nigrescens	813
Angel-fish	171, 475	nobilis	812
Black	280	torrentium	812
family	280	Astarte quadrans	703
White	280	Asterias Forbesii	840, 841
Yellow	280	vulgaris	840, 841
Angelo	674	Astyris	696
Angler, Marbled	173	lunata	693
Anglers	169	rosacea	693
Anglis	171	Atheresthes stomias	188
Anguilla bostoniensis	630	Atherinidae	456
marmorata	630	Atherinops affinis	457
megalostoma	630	californiensis	457
mowa	630	Atka Mackerel	268
texana	630	Atlantic Porpoise	14
vulgaris	629	Tom Cod	223
Angulus tener	703	Attarak	62
Annelida	831-833	Atteitsiak	62
Anodonta	703	Attersoak	62
Anonyx, sp., found in stomach of Sea-robin	256	Atwood, Captain, on abundance of Haddock	225
Anoplopoma fimbria	243, 268	abundance of the Plaice	178, 180, 181
Anopach on habits of the Capelin	545	capture of White Whales in	
Aolkusca	247	Massachusetts	18, 19
Apeltes quadracus	457	distribution of the Lant	245, 246
Aphoristia atricanda	175	distribution of the Scuppaug	387
Apodichthys flavidus	251	food of Cod	213
fuorum	251	food of Mackerel	290
violaceus	251	geographical distribution of	
Aporrhais occidentalis	693	Mackerel	281
Aprolarchus atropurpureus	251	the habits of the Hake	235
Arabella opalina	833	habits of the Horned Dogfish	672, 673
Architeuthis Harveyi	687	habits of Horse-Mackerel	321, 322
princeps	687	habits of the Lant	245
Archoplites interruptus	276, 405	habits of Pollock	229

	Page.		Page.
Atwood, Captain, on the Man-eater Shark	670	Baird, Professor, on pugnacity of Sword-fish	351, 352
movements of Pollock	229	reproduction of the Alewife	586
the Nurse Shark	674	reproduction of Bluefish	440, 441
rate of growth and size of		size of Bluefish	414, 442
Mackerel	298	spawning habits of Herring	502, 503
reproduction of Pollock	231	spawning season of Mackerel	297
scarcity of the Bone Shark	698	the uses of the Alewife	587, 588
the Scrag Whale	30	Bairdiella chrysuræ	375
the size of Codfish	230	Bait-bug	779
size of the Halibut	193	stealers	273
spawning of Mackerel	296, 297	worms	831
the Torpedo	666	Bakkeljaune	200
the torpidity of the Tautog		Balæna boops	29
and the Scup	273	gibbosa	29
transplanting young Lob-		nodosa	29
sters	804	Nova Angliæ	29
useful products of Sperm		vera	29
Whale	11	Balanoptera Davidsonii	30
the uses of the Lant	246	jubartes	29
Aurelia flavidula	842	velifera	30
Auricula vestita Emersonii	693	Balanopteridæ	29
Autennariidæ	173	Balahoo	461
Auxis Thazard	305	Balanus balanoides	828
Azia	250	crematus	829
Bacalaos	200	eburneus	829
Bacchi	200	tintinnabulum	829
Bachelor	407	Baleine jubarte	29
Baddoch	228	Balistes capricus	172
Baggit	468	Balistidæ	171
Bagre	379	Ball-fish	170
Baird, Professor, on abundance of Cod	205	Banded Drm	367
abundance and qualities of		Grouper	412
Spanish Mackerel	312, 313	Rudder fish	331
the Anchovy	611, 612	Bank Cod	201
capture and uses of Herring	565, 566	Lick Bass	406
the Common Pompano	327	Banner Pompano	327
culture of Lake Trout	492	Pompano, distribution of	329
decrease of Cod-fisheries on		Barb	377
New England Coast	221-223	Barbot on mode of capture of South American	
fish of Little Tunny, when		Manatee	127
cooked	322	products of South American Manatee	127
food of Mackerel	291	Bar	247
the food and voracity of Blue-		Bar-fish	406
fish		Barlow, Rev. William, on Mola, Salv. or Sunfish	
the habits of the Eel	631 632	and glue made from it	169
the habits of the King-fish	375, 376	Barnacle Eater	171
history and habits of the La-		Rock	828
fayette	371	Barnacles	828, 829
the history and habits of the		Barnacles, Goose	828
Scup	358-393	Barn-door Skate	667
the Horse-Mackerel	320	Barracuda	448
manner of capturing Plaice	181	Barracouta	448
migrations of Mackerel	283	Barracouta family	448
movements of Herring		Barrel-fish	334
Schools	553-555	Bartram on breeding habits of Alligators	145, 146
movements of Mackerel	287	pugnacity of Alligators	143, 144
movements and migrations of		size of the Alligator	142
Bluefish	434, 435	the voice of Alligators	145
periodicity of abundance of		Bashaw	627
abundance of Herring in		Basking Shark	667
Northern Europe	567	Bass, name for Red-fish	
periodicity of Bluefish	435-437	Bank Lick	406
Plaice fishing and distribu-		Black	266
tion	178	Black	401

7/

10/11

	Page.		Page.
Bass, Brassy	424	Bela decussata	693
Calico	406	harpularia	693
Channel, name for Red-fish	372	pyramidalis	693
family	401	turricula	693
Grass	406	Belknap on the Gramphs	14
Moss	401	Bellamers	63
Mud	405	Bellows-fish	173
Oswego	401	family	170
Otsago	507	geographical distribution of	170
Red, name for Red-fish	372	numbers of	170
Reef, name for Red-fish	372	Bell's Tortoise	157
Rock	404	Belonidæ	458
Rock	413	Beluga	18
School, name for Red-fish	372	Bendire on the Red-fish	478, 479
Sea	378	Benecke, Dr. B., on breeding habits of the brook Lamprey	677, 678
Sea	407	habits of river Lamprey	677
Sea, name for Red-fish	372	migrations of Eels	633, 634
Silver, name for Moon-eye	612	movements of young Eels	650
Spotted, name for Red-fish	372	reproduction of the Eel	634-638
Strawberry	406	reproductive habits of Eels	646, 647
Striped	424, 425	the spawning of Lump-fish	254
Striped Lake	424	viviparous nature of Eels	645
White	428	breeding habits of the Pike	463
White Sea	378	Bergylt	260, 273
Yellow	431	Bering, Capt. Vitus, death of	129
Bastard Cod	268	Bermuda Chub	394
Halibut	182	Berried Lobster	783
Snapper	397	Berycidæ	361
Trout, name for Silver Squeteague	367	Beryx family	361
Turtle	147	Beshow (Alaska Pollock)	233
Bat, Sea	255	(Black Candle-fish)	268
Bath Sponge	845	Bezaan fish	338
Bathymaster signatus	361	Bezuga	370
Batrachus pardus	251	Bicuda	338
tan	251	Bielaya ryba	477
Bavarian char	500	Biet ou habits of American Manatee	120
Bay Alewife	569	products of South American Manatee	127
Porpoise	14	Big-eyed Herring	580-611
Porpoise, of California, and Marsuin, of Eu- rope, similarity between	14	Mackerel	303
Seal	62-65	Mullet	449
Shark	67	Biggy-head	259
Bdellostoma Dombeyi	182	Rig-mouth	405
Beach Clam	708	Black Bass	401
Fleas	824	Bill-fish	336, 337
Beale on distribution of Sperm Whale	7	name for Gar-pike	662
habits of Sperm Whale	9	name for Silver Gar-fish	458
size of Sperm Whale	9	Billard	228
Bean, T. H., on chiroid fishes	268	Billet	228
distribution of the Halibut	190	Biocoenosis	734
distribution of Starry Flounder	184	Bishop Bay	665
the Rough Limanda	184	Bitter Head	406
the Burbot	235	Bittium nigrum	693
occurrence of Branch Alewife in certain lakes of New York	568-594	Bitumen	11
Bear, Sea	49	Bivalves	703-710
Trout	497	Black Angel-fish	280
Bearded Seal	63	Bass	401
Beardless Drum	372	distribution of	401, 402
Beaver	11	habits and food of	402
Bécasse de Mer	338	name for Black Rock-fish	266
Becker	393	names of	401
Bedlamers	62	spawning of	402, 403
Bedliners	62	tenacity of life of	403, 404
		transportation of	404

INDEX.

	Page.		Page.
Black Bass, Big-mouth	401	Blepsias cirrhosus	259
Small-mouth	401	Blew-fish	435
Black-bellies	582	Blew Hound-fish	302-435
Black Biters	261	Bluffs	298
Candle-fish	268	Blobs	259
Black-Coal-soy	228	Blockin	228
Black-dotted Flounder	187	Blow-fish	418
Black Drum	367	Blower	170
Black-fin	541	Blowing Whale	11
Black-finned Shark	672	Blue-back	582
Black-fish	268, 269	Salmon	477
Black Grouper	411	Blue Bream	406
Grunt	398, 399	Cat-fish	626
Harry	407	Cat-fish (see Cat-fish)	249
Horse	615	Chimera	862
Jack	228	Cod	268
Lobster	783	Crab	775
Lungo	487	Crab, distribution of	775
Mullet	375	Crab, external character of	775, 776
Perch	444	Crab, habits, uses, &c.	776-778
Perch, name for Black Surf-fish	278	Fin	541
Black-Pollock	228	Herring	579
Black Rock-fish	266	Lumpfish	254
Rock-fish of Alaska	266	Parrot-fish	274
Black Rock-fish, spotted	266	Perch	277
Rocador	379	Perch, name for Cunner	273
Salmon	487	Perch, similar in form to Red Perch	260
Snapper	397	Pike, name for Pike Perch	417
Snappers, name for Cod	201	Shark	668, 671, 675
Spotted Trout	475	Snappers	432
Surf-fish	278	Sno-fish	406
tailed Crab, name for Shrimp	819	Surf-fish	277
Triple-tail	545	Bluefin	541
Warmouth	405	Bluefish	433
Whale	11-25	abundance in New Jersey, 1870 and 1881	439, 440
Will	407	distribution of	433
Blackfish	17	enemy of Mackerel	299
capture of	13	family	433
distribution of	11	food and voracity of	437-440
food of	12	Girella nigricans	394
movements of	12	movements and migrations of	434, 435
name for Sea Bass	407	Mummichog	449
reproduction of	12	name for Choguet	273
schools, stranding of	12	name for Sea Bass	407
size of	12	name for Squeteague	362
time when most abundant	12	names of	433
used as food	13	periodicity of	435-437
useful products of	13	reproduction	440, 441
value of	13	size of	441, 442
Alaska	466, 467	uses of	443, 444
Blackfishes	11	Bluesides	62
Blackford, on prices of Bull-frogs	161	Blunt-nosed Shiner	322
Blacksmith	276	Boar-fish	335
Blainville, on Sperm Whale in Brittany	9	Bocene	266
Blake, J. H., Notes on Sperm Whale Porpoise	18	Boccaccio	266, 267
Blauchera, de la, on Sword-fish in Bay of Biscay	342	Boccone, S. Paulo, on the Sanguisuga, parasite of	
Blanquillo	361	Sword-fish	354, 355
Blasius, on distribution of Ringed Seal	65	Bodach	65
on geographical distribution of Hooded		Bodieron	267
Seal	70	Boeck, Axel, on distribution and habits of Euro-	
Bleking Herring	550	pean Lobster	807-810
Blennidae	250	on process of shedding of European	
Blenny family	250	Lobster	793, 794
Blepharis crinitus	326	Bohuslan Herring	550

in/

670, 672, 67

	Page		Page
Boldner, Leonhart, on the development of the Lam- prey	678	Brandt on abundance of South American Manatee. the Arctic Sea-cow	123 134
Bolina alata	842	breeding habits of Manatees	118
Bone fish, name for Dog-fish	677	Brassy Bass	424
name for Lady-fish	612	Bream	393, 394
name for Surgeon ⁴ fish	279	Blue	406
Bone Shark	667-670	Copper-nosed	406
Bonito	316	Salt-water	393
abundance of	317	Breeding Harps	62
Cuban name for Medregal	331	Brevoort, J. Carson, on names of Codfish	200
distribution of	317	uses of the Gurnard	256, 257
as a food-fish	318, 319	Brevoortia patronus	570, 575
name for the Cobia	444	pectinata	570
Pacific	319	tyrannus	569
plain	306	tyrannus aureus	570
striped	316	Bricke	676
Bonnet-headed Shark	677	Briggs on intestines of embryonic White-fish	516
Bonnet-worm, food of Black Bass	462	Brim	406
Bony fish	569	Brit	550
Boohoo	337	found in the same locality as the Lant	246
Boregat	267	Brochet	462
Boregata	267	Brook-fish	466
Boring Amphipod	825, 826	Pickereels	464
limnoria	826, 827	Sucker	614, 615
sponge	850	Trout	475
Bothragonus Swani	258	Brooks, W. K., on anatomy of the Oyster	711, 712, 713, 714
Bottle fish	170	reproduction of the oyster	719, 720, 721
Bottle-head Whale	11	Brosnius brosmo	233, 236
Bottle-nose Whale	14	Brosnophycis marginatus	244
Boundary Herring	550	Brotulidæ	244
Bowfin	658	Brown Cod	201
Bowhead and Right Whales, confusion between	20	Brown on products of Ringed Seals	66
Bowhead Whale	20	Brown, J. Ross, on Northern Fur Seals	49
economic importance of	21	Brown, Robert, on geographical distribution of Hooded Seal	69
feeding habits of	23	Brown, Dr. Robert, on similarity of feeding of Whales and Mackarel	294
food of	23	Brown Rock-fish	264
movements of	21	Snapper	410
reproduction of	21	Buccinum ciliatum	693
size of	21	Buccinum undatum	693, 694
Box-fish	170	Buckland on abundance and value of Gar-fish	459
Box Turtle, Carolina	158	Buckland, Frank, on chemical composition of Eu- ropean Lobster	811, 812
Box Turtles	158	Buckland, F. T., on gastronomic value of Bull- frogs	160, 161
Brachyistius frenatus	278	gastronomic value of Cat- fish	250
rosaceus	278	the habits of the Lant	244, 245
Brail	178	the Lump-fish	254
Brain Corals	841	mode of capture of Bull-frogs	160
Braize	393	number of eggs in English Lobster	798
Brama chilensis	335	on rate of growth and shed- ding of European Lobster	794, 795
Brama Rail	335	Buckler	776
Bramidæ	335	Buckskin Trout	488
Branch Alewife	588	Bug, Salve	827
capture of	593	Buffalo Cod	268
economic value of	593	Buffalo-fish	614
enemies and fatalities of	592, 593	Buffalo-fishes	615
movements of	591, 592	Buffalo Jack	394
occurrence in certain lakes of New York	588-594	Bull-frogs	159
origin of, in Lake Ontario and New York Lakes	590, 591	breeding habits of	159
Branch Alewife, scarcity of in St. Lawrence River	589		
Branch Herring	580		
Branchiostomidæ	681		
Branchiostoma lanceolatum	681		
Branded Drum	372		

668-670

	Page.		Page.
Bull-frogs, culture of	159	California Sardine	569
discovery of	159	Sea Elephant	72
economic uses of	160	general history of	79
how to get spawn of	159	geographical distribution	
take care of spawn of	159	of	72
modes of capture of	160	habits of	73
range of	159	and Southern Sea Ele-	
size and mode of life of	159	phant, comparison be-	
Bull-head, name for Horned Pont	627	tween	74
Sculpin	258, 259	Sea Lion	44
Whiting	377	geographical distribution of ..	44
Bull Mackerel	303	habits of	45
Bull-pout	627	Shrimp	818
Bull Trout	504	Smelt	457, 544
Bunch Whale	26	Yellow-tail	331
Bunker	569	Callinectes hastatus	775
Burbot	235, 236	larvatus	775
abundance of	238	ornatus	775
American and European, relation between	237	tumidus	775
distribution of	238	Callista gigantea	708
economic value of	240	Callocephalus vitulinus	60
food and feeding habits of	239	Callorhinus	37, 40
information desired concerning the	240	ursinus	49, 52, 53, 77
mode of capture of	239	Cambarus	812
name of	235, 236	acutus	814
popular names of	236	affinis	814, 815
reproduction of	238	Bartonii	814, 815
size of	237	Clarkii	814
Burgall	273	Diogenes	815
Burmeister on range of American Manatee	116	obesus	814
Burr-fish	170	virilis	814
Butterfish	333	Campbellite	487
Humpbacked	323	Cancer antennarius	771
Butterfly-fish	257	borealis	769
Butterfly Ray	665	irroratus	765
Cabezon	259	found in stomach of Sea-robin ..	256
Cabrilla	413	magister	770
Spotted	414	productus	771
Cachalot	7-10	Candle-fish	268, 547
Caing Whale	11	Caenestrini on distribution of the Pollock	228
Calamary, Flying	690	on the Scomber pneumatophorus	303
Calamus arctifrons	394	Cape May Goody	370
bajonado	394	Capelin	544
macrops	394	name for Sand Smelt	456
megacephalus	394	Capelinas	544
Milneri	394	Carangidae	322
Calci-Spongia	344	Carangoid fishes	322
Calico Bass	406	Caranx chrysos	324
California Anchovy	612	cromenophthalmus	324
Conger Eel	628	fallax	325
Grampus	14	hippos	323
Gray Whale, abundance of	31	Richardii	325
capture of	32	Carassius gibelio	620
distribution of	31	Caravina	378
food and reproduction of	32	Carchæne	322
habits of	31	Carcharias caperuleus	671
size of	32	glaucus	675
Grunts	400	lamella	676
Hake	243	obscurus	671
Herring	568, 569	Carcharodon Atwoodii	670
Pompano	334	carcharias	669, 671, 675
Prawn	921	Rondeletii	670
Salmon	479	Carcinus maenas	774

ae/ 2/ 6/

2/

0/ 676/

	Page.		Page.
Cardium islandicum	703	Cero	307, 316
pinnulatum	703	King	307, 316
Carneo Spongiae	844	Spotted	307, 316
Carnivora, Amphibious	33	Cetacea	33
Carolina Box Turtle	158	Cetorhinus maximus	667, 677
Pompano	326	Chaenobryttus antistius	405
Carp	618	gulosus	405
growth and size of	624-626	Chaetodipterus faber	445
habits of	621, 622	Chaetodontidae	280
races of, their history and habits	618-621	Channel Bass, name for Red-fish	372
reproduction of	622-624	Cat, common	627
Leather	619	of the Potomac	627
Mirror	619	Cats	626
Poor Man's	620	Chapman on food of Sirenians	118
Scale	619	size of South American Manatee	118
Sucker	615	Char	501
<i>cf. mullet - 614</i> Carpenter, Dr. Philip, on the Cuttles	687	Bavarian	500
Carpinoides cyprinus	615	Chars, distribution and effect of temperature on	502, 503
Carroll on geographical distribution of Hooded Seal	69	Chasmistes brevirostris	615
habits of Hooded Seals	58	liorus	615
Cassia madagascariensis	699	luxatus	615
Cat-fish	248	Chelonia mydas	150
Blue	249, 626	virgata	150
Channel, common	626	Chelopus	157
Flannel-mouth	627	guttatus	158
food of	249	inaculptus	158
Gaff-top-sail	627	Muhlenbergi	158
Great Lake	627	Chelonia terebraus	825
Great Mississippi	626	Chelydra	153
Mud	627	serpentina	153
pugnacity of	249	Chelydroidae	153
Salt-water	626	Cherna	411
Sea	248, 627	Chewagh	504
Spotted	249	Chicken Halibut	178, 194
Stone	627	Tortoise	157
Yellow	627	Chickwit	362
Cat-fishes	626	Chief Mountain White-fish	542
Cat, Sea	51	Chilomycterus geometricus	170
Shark	677	Chimera affinis	667
Cat-thrasher	582	blue	667
Catesby on the Sword-fish	339	Colliei	667
Catostomidae	614	family	667
Catostomus ardens	615	Chimæridae	667
Commersoni	615	Chinook Salmon	479
fecundus	615	Chinquapin Perch	407
longirostris	615	Chione succincta	708
macrocheilus	615	Chiridae	267
nigricans	615	Chiton	693
occidentalis	615	uses of	701
taboënsis	615	Chogset	273
Caulolatilus anomalus	361	Chopa blanca	370
chrysope	360	spina	393
microps	360	Chorny Ryba	466
Cavally	323	Choweecha	479
the Scad and the Jurels	322-326	Christmas Flounder	183
Cavasina	331	Chromis punctipinnis	276
Cayman	141	Chrysemys Belli	157
Caymanes	142	marmoratus	157
Cebedichthys violaceus	250, 251	picta	157
Centrarchidae	401	reticulata	157
Centrarchus macropterus	406	Chub, name for Black <i>fish</i>	269
Cephalopoda	687	Fall-fish	617
Ceratichthys biguttatus	617	Lafayette	370
		Tantog	269

8/5/6/

7. 8.

3/ P

	Page.		Page.
Chub, Bermuda	394	Clupea vernalis	579, 588
Day	614	Clupeidæ, families related to	610-613
Eel	236	Clymenella torquata	833
Mackerel	303-305	Coal	228
Nigger	618	Coal-fish	228, 233
River	617	Coal-Whiting	228
Salt-water	269	Coalsey	228
Sucker	614	Cobia, distribution of	444
of Utah Lake	616	Cock-paddle	254
Clubby Goby	255	Cock-paitle	254
Cicharra	324	Cockle	708
Cichlid family	276	Cod	200
Cigar-fish	324	family and its kindred	200
Cinosternoidæ	154	Bank	201
Cirripedia	828, 829	Bastard	268
Cisco	541	Blue	268
Cistudo	158	Brown	201
carolina	158	Buffalo	268
ornata	158	Clam	201
Citharichthys sordidus	186, 187	Cultus	267
Civit-cat	11	Deep-water	201
Clam	708	fish, name for Cultus Cod	267
Beach	708	Fresh-water	236
Cod	201	Herring	201
Flat	708	Inshore	201
Hard	708	Native	201
Hen	708	Night	214
Long	707	Pine-tree	201
Painted	708	Rock	200
Round	708	School	201
Sea	708	Shoal-water	201
Soft	707	Shore	201
Surf	708	Tom	267
Clark, A. H., on abundance of Frigate Mackerel	306	Worm	201
abundance of Halibut	192	Codfish, distribution of	202
distribution of Cod	202	food of	211, 212
George, letter on marked White-fish	568	names of	200
on rate of growth of White-fish	569	history of, in America	201
Clarke, S. C., on the Black Gronper	411	reproduction of	214
breeding habits of the Drum	368	schooling of the	203
the Cobia	444	schools, migrations and movements of	207
habits and spawning of Sheeps-head	325	size of	220
mode of life of Alligators	145	Cœlenterates	841, 842
names and habits of Whiting	377	Cogyard	379
the Big-fish	399	Coho	477
size, abundance, and habits of Silver Mullet	453	Cojilua	324
spawning of Red-fish	373, 374	Cojumero	116
Cliona sulphurea	850	Colemic	228
Clupea astivalis	579	Collet on distribution of the Sea Cat-fish	248
chrysochloris	594	Robert, on the Gray Seal	103
cœrulea	579	Collins, Capt. J. W., on distribution of Mackerel	281
finta	594	Mackerel-fishing grounds	294
halco	579	migrations of Mackerel	301, 302
harengus	584	spawning of Mackerel	295
indigena	579	food of Halibut	196
mattowaca	607	food of Mackerel	192
mediocris	607	Halibut spawn	197
menhaden	568	migrations of Halibut	194
mirabilis	568	size of the Halibut	193
parvula	579	Colmey	228
pusilla	579	Common Flounder	178
sapidissima	594	Pompano	327
		Seal	55
		Sun-fish	406

	Page.		Page.
Conch	694, 699	Cover	177
food and destructiveness of	695, 696	Cover-clip	177
uses of	700	Cow-fish	13, 16
Condamine on habits of South American Manatee	121	Cow-pilot	275
Coney	412	Crab, Black-tailed, name for Shrimp	818
Conger Eel	655	Blue	775
California	627	Common edible	770
Congere	627	Common, of Pacific coast	770, 771
Congo Eel	247	Crab-eater	444
Congrogadidæ	243	Crab, Green	774
Congrogadus, family	243	Horseshoe	829
Conklin on food of Sirenians	119	Jonah	769
habits of American Manatee	121	Kelp	778
size of Florida Manatee	117	King	829
Cony-fish	237	Lady	774, 775
Cooter	158	Oyster	765, 766
Florida	155	Red	771
Cooth	223	Red Rock	778
Cope on distribution of the Alligator	142	Rock	766
Hooded Seal	71	Rock, of Pacific coast	771, 772
Terrapins	154	Sand	774
the Wall-eyed Pike	423	Sea	775
Copper-nosed Bream	406	Stone	772-774
Corallium rubrum	841	Crabs	763-780
Corals	841	Fiddler	763
Brain	841	Hermit	779
Finger	841	Mud	772
Fungus	841	Soft	776
Hydroid	841	Soldier	779
Polyp	841	Spider	778
Stag-horn	841	Craibe, Agnes W., on habits of Leopard Seal	60, 61
Star	841	Craig Flounder	198
Cordeaux, John, on general history of Harbor Seals	58, 59	Crane, Agnes, on habits of South American Ma- natee	121, 122
Coregonus Artedi	541	Crangon franciscorum	818
clupeiformis	507	vulgaris	816
Hoyi	541	found in stomach of Sea-robin	256
labradoricus	541	Crappie	407
nigripinnis	541	Crawfishes	812
quadrilateralis	541	Crayfish	780
tullibee	541	and Lobster, similarity of shedding and spawning habits	813
Williamsoni	542	Crayfishes	812-816
Corn-cracker	666	economic value of	814
Cornide, Don Joseph, on pugnacity of Swordfish	351	habits of	814-816
Coronula diadema	828	relations and distribution of	812-814
Corsair	265	Creek fish	614
Spotted	265	Cremnobates integripinnis	251
Coryna	378	Crenella glandula	763
saturna	379	Crenilabrus melops	273
Coryphæna hippurus	332	Crepidula fornicata	693
Coryphænidæ	332	plana	693
Coste on reproduction of European Lobster on the French coast	803, 804	Crested Seal	62, 63, 68
Coturniæ	733	Crevallé	323
Cottidæ	258	Horse	324
Cottus aeneus	258	Croaker	378
octodecimspinosus	258	name for black Surf-fish	278
polyacanthocephalus	259	fresh-water Drum	370
scorpius grœnlandicus	258	Crocodile	141
Conch, on abundance of Dogfish	673	North American	141
food of Sperm Whale	10	Crocodilus acutus	141
the habits of the Lant	245	Crocus, name for Croaker	378
habits of the Silver Hake	242	name for Drum	370
the habits of the Skipjack	461	Crustaceans	763-830

	Page.		Page.
Cryptodon Gouldii	703	Dallia pectoralis	466
Cryptodari siliqua	703	Damalichthys argyrosomus	276, 277
Ctenolabrus adspersus	273	Dampier, on size of South American Manatee	117
similar in form to Red		Dard	337
Perch	260	Dareste, M. C. M., on the classification of the Eel	629, 630
rupestris	273	Dargie	228
Cuban jurel	325	Darters	417
Cabby yow	444	Darwin, on local variation in form of Oysters	742, 743
Cuckoo-fish	257	Date-fish	767
Cucumbers, Sea	838	Dauphin Blanc	18
Cudden	228	Davy, on movements of young Eels	651
Cuddy	2/1228	Dawson, J. W., on scarcity of Gaspereaux in Saint	
Cultus Cod	267	Lawrence River	589
Cupfisher, similar in form to Rose-fish	260	Day Chub	618
Cunner	273	Daylight, name for Sole	177
Cunners	274	Spotted Sand Flounder	199
Cusk	233	Deal-fish family	449
abundance of	233	Decaisne, on cause of green color of Oyster	738
Cut-lips	618	Decapterus macarellus	324
Cutlass-fish	335	punctatus	324
Cuttle-fishes	687	Deep-Sea Flounder, name for Plaice	178
Cuttles	687-693	name for Pele Flounder	198
Cavier, on distribution of Sword-fish	340	Deep-water Cod	201
Cyanea arctica	842	Sculpin	258
Cybinus	307	Trout	488
maculatum, supposed to have been caught		Trout, name for Squeteague	364
at Prince Edward Island	310	Whiting	377
Cycleptus elongatus	615	DeKay, on abundance of Chub Mackerel	303
Cyclopteridæ	253	Pig-fish	399
Cyclopterus lumpus	253, 254	distribution of the Chogset	273
orbis	255	Hooded Seal	70, 71
Cylichna alba	694	Rose-fish	260
Cymatogaster aggregatus	278	gastronomic value of Cat-fish	250
Cynoscion maculatum	365	Harbor Seals	55, 56
nobile	378	the uses of the Silver Hake	243
nothum	367	Delphiuapterus catodon	18
parvipinne	379	Delphinus Bairdii	16
regale	362	clymenis	16
Cyprina islandica	703	Demoiselle and Cichlid families	275, 276
Cyprinidæ	616	Dentalium pretiosum	703
Cyprinodon californiensis	466	Descourtlitz, on breeding habits of Manatees	118
Cyprinodontidæ	466	mode of capture of South American	
Cyprinus carpio	616-618	Manatee	127
carpio communis	619	Devil-fish	31
carpio coriaceus, sive nudus	619	geographical distribution of	173
carpio specularis	619	habits and form of	173
Cystophora angustirostris	74	Devil-fishes	173, 664 6/
antillarum	71	Diabasis	397
cristata	65, 68, 71	aurolineatus	398
falklandica	74	Plumieri	398
kerguelensis	74	Diamond-back Terrapin	155, 157
leonina	74	breeding habits of	156, 157
proboscidea	74	characteristics and habits	
Dace	616, 617	of	156
Horned	617	distribution of	156
Red	617	economic value of	157
Dactylometra quinquecirra	842	food of	156
Dactylopterus volitans	255	Diamond Flounder	185
Daddy sculpin	258	Diaphana Gouldii	694
Dall, on Ambergris	11	Dickie	224
Northern Fur Seals	53	Diffenbach, E., on the Scrag Whale	31
reproduction of the Burbot	238	Diodontidæ	170
Sword-fish	350	Diopatra cuprea	833
Dallea delicatissima	467	Diplodus Holbrookii	366

	Page.		Page.
Diplodus probatocephalus	390	Dwarf Salmon	470
Diploria cerebriformis	841	Eagle Rays	665
Ditrema atripes	277	Earle, R. E., on Bluefish in North Carolina	443
furcatum	277	food of Cod	213, 214
Jacksoni	277	history of Spanish Mackerel	309, 310
laterale	277	migrations of Codfish	210, 211
Temmincki	276	movements of Pollock	230
Doctor-fish	279	Spanish Mackerel	310, 311
Dogfish, name for Shark	675	reproduction of Codfish	215, 219
Shark	675	Haddock	227
Dog Salmon	476	Pollock	230, 231
Sea	55	Spanish Mackerel	313-315
Shark	675	schooling of the Codfish	203-205, 206-207
Dogfish, enemy of Mackerel	259	size of Codfish	220
name for Bowfin	236	Easter Mackerel	304
Burbot	658	Echeneididae	446
Horned	672	Echidnoceros setimanus	778
Smooth	672	Echinarachnius parma	838, 839
Dollar-fish	333	Echinoderms	838-841
Dollardee	406	Eel	629
Dolly Varden Trout	504	classification of	629, 630
Dolphins	16	discovery of female	636
(Coryphænidæ)	332	male, by Syrski	638-640
habits of	16	Conger	655
Doré	418	Conger, California	628
Dormitator	255	Congo	247
Dorosoma lepidocanum	610	Horned	246
Dorosomatidæ	610	Lamper	247
Dorset	200	Maroona	247
Dory	417-420	Pout	236, 247
family	335	Sea	655
Dotard	58, 65	Silver	335
Douglass, on Alewives	579, 580	Slimo	680
products of Sperm Whale	11	Eels, ancient beliefs concerning reproduction of	634-638
Sperm Whale in North America	8	external characteristics of	644, 645
Dowler, Bennet, on the manner in which Alliga-		geographical distribution of	630, 631
tors obtain food	142, 143	habits of	631, 632
Drill	636	internal characteristics of males and females	640-644
destructiveness of	697	life history of	632, 633
Drum	367	male, do they leave the sea and enter fresh-	
family	362	water?	648
Banded	367	migrations of	633, 634
Beardless	372	normal, reproductive habits of	646, 647
Black	367	supposed to be viviparous	645
Branded	372	young, search for	646
Fresh-water	370	Lamper	676
Little	367	Egg-fish	170
Red	362, 371	Egrefin	224
Striped	367	Egypt Herring	460
Drumfish	15	Eithinyoo-cannooshoeco	462
Drummer, name for Sculpin	259	Elacate, Canada	444
Drummers	362	Elagatis pinnulatus	332
Dubertus rhodinsulensis	29	Eleotris	255
Duck-billed Cat	659	El-la-chick	157, 158
Ducky Shark	671, 672	Elliott, H. W., on difference between California	
Dudley, Hon. Paul, on the Scrag Whale	30	and Alaska Sea Lions	48, 49
Dugong	127	figures of Fur Seals	54
Duméril and Bibron on classification of the Tor-		Fur Seals	53, 75-113
toise	147	Northern Fur Seals	50
Danfish	200	peculiar methods of catching	
Dunn, Matthias, on spawning of mackerel	297	Sheepshead	383, 384
Du Tertre, on breeding habits of Manatee	118	Sea Lions	39, 44
capture of American Manatee	126	size of Northern Fur Seal	50
habits of American Manatee	120	uses of Pacific Walrus	36

Dusky Shark --- 672

	Page.		Page.
E-jo-ki-nik	466	Expedition, the great Northern	129
Elops saurus	243	Exquemelin, on food of Alligators	142
Ellwhop	580	habits American Manatee	121
Ellwife	580	name of Manatee	116
Embriocidæ	276	Eye-bait	246
Empereur	337	Fabrics, on habits of Harbor Seal	57
Emser	133	Fair Maid	387
Emydidæ	154	Fall-fish	617
Emys meleagris	158	Fan-fish	338
English Herring	582	Fat-back, name for Menhaden	569
Engraulidæ	611	name for Mullet	449
Enophrys bison	259	Fat-head	275
Eusatella americana	703, 707	Fat Herring	550
Entomostracans	827	Mullet	451
Entz, on green matter in animals	739	Fiber canadensis	11
Épée de Mer	337	Fiddler Crabs	753
Epialtus productus	778	Fierasfer family	243
Epinephelus apna	412	Fierasferidæ	243
Drummond-Hayi	412	File-fish family	171
morio	410	geographical distribution	171
nigritus	411	number of species--habits	171
striatus	412	Orange	171
Eretmochelys squamata	149	File-fishes	169
Erignathus barbatus	63, 107	Finback Whales	24, 27, 28-30
Erinyon Goodei	614	abundance in New England	28
succetta	614	distribution of	28
E-ruang-uk	466	movements of	28
Eschricht and Reinhardt on distribution of Bow- heads	20	in the Pacific	28
Esox americanus	464	Finger Coral	841
lucius	461	Mullet	453
enemy of Alewives	592	Finner, Sharp-headed	30
nobilior	464	Finners	24
enemy of Alewives	592	Fish Ox	120
reticulatus	462	Fisher, Captain, on spawning of Mackerel	295
enemy of Alewives	592	Fisher, S. E., on Southern Shrimps and Prawns	822, 823
vermiculatus	464	Fishing Frog	173
Espada	337	Fissurella aculeata	701
Espadarte	337	Five-finger	840
Espadón	337	Fjord Herring	551
Estes, Dr., on habits of the Bowfin	658, 659	Seal	62
D. C., on habits of Moon-eye	613	Fjordskål	62
Estheostomatidæ	417	Flannel-mouth Cat	627
Etzel, Anton von, on distribution of Halibut	192	Flasher	445
Eubalana antipodarum	25	Flat Clam	708
australis	25	back	27
biscayensis	24	fish	179, 182
cisarctica	24	fishes	175, 176
cullamach	25	Fleas, Beach	824
Eucyclogobius Newberrii	255	Sand	824
Eulachon	547	Fleming, on the range of American Manatee	116
Eumecesogrammus subbifurcatus	213	Sperm Whale in Orkney	9
Eumetopias	37	Flétan	191
elougatus	39	Fliaum	265
Stelleri	38, 39, 49, 82	Floe-rat	66
Eupagurus pollicaris	779	Florida Cooter	155
Bernhardus	779	Flounder	177, 178, 184
longicarpus	779	Black-dotted	187
pubescens	780	Common	178
Enplotes	733	Craig	198, 237
European Leech	835	Deep-Sea	178, 198
Exocoetus californiensis	459	Diamond	185
Rondeletii	459	Four-spotted	181
Exoglossum maxillingua	618	Pole	177, 178, 196
		Rusty	197

	Page.		Page.
Flounder, Sand, spotted.....	199	Fur Seals, dolphin, jumps of.....	101
Smooth.....	183	effects of heat on.....	83
Starry.....	184	eyes of the pups.....	94, 95
Turbot.....	178	fasting at the rookeries.....	84
Water.....	199	fine opportunities for observation.....	107
Winter.....	179, 182	general character of.....	37
Flounders.....	175	genitalia of the male and female.....	108
Flinke.....	182	gentleness of holluschickie.....	99
Flower, W. H., on distribution of Ringed Seal....	65, 66	geographical distribution of.....	37, 38
Fly-fish.....	264	and migra- tion of.....	49
Flying Calamary.....	690	habits of.....	37, 75
Flying-fish.....	257	hauling-grounds on beaches for hollu- schickie.....	99
family.....	459-461	holluschickie.....	72, 82, 96
Flying Gurnard.....	255	holluschickie do not fast.....	99, 100
Food-fishes.....	169	hospitals of.....	93
Fool-fish, name for File-fish.....	171	intestinal worms.....	84, 85
Flounder.....	183	irregular feeding of the pups.....	110
Forster, J. R., on feeding habits of the Burbot ...	239	leaping out of water.....	101
size of Burbot.....	237	life history of.....	75
Fortin, P., on abundance and modes of capture of Horse-Mackerel.....	321	locating the hauling-grounds of hollu- schickie.....	98
Four-eyed fish.....	280	mangy cows and pups.....	92
Four-spotted Flounder.....	181	monstrosities among.....	105, 106
Fox Shark.....	671	necessity of understanding the method of reproduction.....	106, 107
Freia producta.....	733	odor of.....	96
Fresh-water Cod.....	256	old and young males fighting.....	79
Drum.....	370	only one pup born at a time.....	79
Seals.....	59	organization of the rookeries.....	86, 87
Terrapins.....	152	paths through the rookeries for hollu- schickie.....	98, 99
Friar.....	456	pelagic coition impossible.....	111
Frigate Mackerel.....	305	period of gestation.....	111
Frog-fish.....	173	podding of the pups.....	94
fishing.....	173	power of scent of.....	96
Frostfish.....	336	pre-emption of the rookeries.....	80
Fulgur carica.....	694	preliminary advances of sexual union.....	110
Fundulus grandis.....	466	range of vision of.....	95
majalis.....	466	relative duration of life of.....	79
parvipinnis.....	466	reproduction is terrestrial.....	79
Fungus corals.....	841	review of statements of life in rook- eries.....	96, 97
Fur Seals.....	37	rich milk of.....	110
action of reproduction.....	111	second change of coat.....	94
age of female when first pregnant.....	78	shedding the hair.....	103
albinos among.....	105	sleeping.....	89
among the breakers.....	101	sleeping afloat.....	84
arrival of Cow-seals at rookeries.....	85	small number of barren females.....	113
at seal grounds.....	77	speedy birth of pups.....	108
attitudes and coloration of.....	81, 82	sports and pastimes of young bache- lors.....	100
on land.....	86	stagey seals.....	103
battle of the Seals.....	80, 81	sullenness of old males.....	95
behavior of females on rookeries.....	88	swimming feats of the bachelors.....	101, 102
at night, of.....	95	taste in the matter of weather.....	105
change in weight.....	104	unattached males.....	87
classing the holluschickie by age.....	103	vitality of the male.....	112
coming in of the bulls.....	77, 78	voice of the.....	82, 83
comparative size of females and males.....	103, 104	weight of females.....	104
courage of.....	87, 88	where do they die?.....	106
definition of holluschickie.....	98	young Seals learning to swim.....	93
description of adult male.....	75-77	Northern.....	43
Cow-Seal.....	85, 86		
the holluschickie.....	97, 98		
pups.....	89-91		
disorganization of rookeries.....	91, 92		
dispersal of the holluschickie.....	105		
distribution in southern seas.....	88		

	Page.
Gädda	402
Gadidae, unimportant families related to the	243
Gadus	200
chalcogrammus	232
compressus	236
lacustris	235
lota	235
maculosus	236
morhua	200, 236
periscopus	232
tau	251
Gaff-topsail Cat-fish	627
Pompano	329
Gag	413
Gaillon and Johnson, observations on green color of Oyster	737-738
Galeocerdo tigrinus	674, 675
enemy of Sword-fish	354
Galeorhinus zygopterus	676
Gammarus locusta	824
Gannet, enemy of Mackerel	299
Gaper	708
Garden, Alexander, on the Sword-fish	339
Gar-fishes, Silver	458
Garibaldi	270
Garman, S. W., on distribution of West Indian Seal	68
Garoupa	411
Gar-pike	662
pugnacity of	663
Alligator	663
Long-nosed	662
Short-nosed	663
Garrick	458
Garrod on size of South American Manatee	118
Garupa	262
Black and Yellow	264
Flesh-colored	264
Green	265
Red	264
Speckled	263
Gaspareau	580, 589
Gaspergon	370
Gasperöt	580
Gasteropoda	693
Gasterosteidae	557
Gasterostens aculeatus	338, 457
biaculeatus	213
microcephalus	458
pungitius	457
Gastrochæna	699
Gawnook	460
Geare, R. I., on the Lake White-fish	507
Geddes, Patrick, on chlorophyl-containing ani- mals	737, 739
Gelasimus minax	763
pugilator	763
pugnax	763
Genyonemus lineatus	379
Geographic Tortoises	152
Geophagus surinamensis	276
George's fish	201

	Page.
German Leech	837
Gerres argentens	279
harengulus	279
homonymus	279
Gerridae	269
Gervais on Sperm Whale in Mediterranean	9
Gherbis Sponge	848
Gibbar	29
Gibbartus	29
Gibbero Dorso	29
Gibbes, L. R., on habits of the Stone Crab	773
the Southern Shrimps	821, 822
Gibbonsia elegans	251
Gila elegans	616
Grahami	616
robusta	616
Gill on distribution of Black Bass	402
history of California Sea Elephant	72
Sperm Whales, Giant and Pigmy	11
Gillichthys mirabilis	255
Gilpin, Dr. Bernard, on geographical distribution of Hooded Seal	69
Gilpin, habits of the Mackerel	285-287, 288
movements of Halibut	224
Gilt-head	273
Girella nigricans	394
Gizzard Shad	610
Glashan	298
Glass-eye	417
Glasscock	228
Glatbutt	199
Glaudius	337
Globe-fish	170
Globicephalus intermedius	11
Scammonii	12
swineval	11
Glossan	228
Glossin	228
Glove Sponge	845-847
Glut Herring	582
Glyphidodon saxatilis	275
Glyptocephalus cynoglossus	198, 237
pacificus	186-188
zachirus	188
Gnathodon eunectus	708
Goat's-head Porgy	393
Gobius glaucifrons	255
soporator	255
Gobiesocidae	253
Gobiesox reticulatus	255
Gobiidae	255
Gobiosoma alepidotum	255
Goblins	259
Goby, Chubby	251, 255
Goggle-eye	404, 405
Goggled-eyed Jack	324
Goggler	324
Gold-fish	276
Golden Shiner	616
Trout	475
Goldsinny	273
Golet	507

3/6/

	Page.		Page.
Goody	370	Green Cod	228
Cape May	370	fish	433
Goose Barnacles	228	Garrupa	265
Goose-fish, appearance	174	head	425
eggs—time of spawning	174	Leech	835
geographical distribution of	173	Pike	418
habits and food of	173	Pollock	228
palatable for food	174	Rock-fish	265, 266
Goose fishes	173	Rock Trout	267
Gopher Tortoise	158	Smelts	456
Gorgonia acerosa	841	Sturgeon	662
flabellum	841	tail	569
setosa	841	Turtles	147, 150
Gottenburg Herring	550	breeding of	151
Gonjon	627	distribution of	150
Gourd-seed Snaker	615	food and feeding habits	150
Gräben Herring	550	names of	150
Grampus	12	size of	150
color and size of	13	uses of	151
distribution of	13	North American species of	150
habits of	14	Greenland and Right Whales, Baleen of	21, 22
known to early colonists	14	Turbot	197
products of	14	Whale	20
California	14	Greenlander	258
Mottled	14	Grenadier family	244
White-headed	14	Grey Gurnard	256
griseus	13	Halibut	194
Stearnsii	14	Grey-lord	228
Grande Écaille	611	Grey-Trout, name of Squeteague	362
Grandykve	611	Gribble	826
Grass Bass	406	Grilse	468
Herring	550	Gruper	410
Grass-hopper, name for young Lobster	783	Ground-holders	783
Grass Rock-fish	264	Ground-keepers	201, 213
Sponge	848, 849	Ground Pike	424
Gray, on distribution of the Grampus	13	Shark	674, 675
feeding habits of Bowhead	23	Tenders	201
Greenland Whales	22	Grouper, name for Rock Cod	262
Pilot Whale	11	Triple-tail	444
Sperm Whale in English Channel	9	Banded	412
figures of Fur Seals	54	Black	411
geographical distribution of the Hooded		Red	410
Seal	70	Grubber	612
North American Manatees	114	Grubbers, name for Cod	212
Northern Fur Seals	52	Grubby	258
Gray Back Whale	31	Grunt, Black	308, 390
Leech	835	California	400
Perch, name for Drum	370	Red-mouth	398
Pickerel	421	White	399
Pike	424	Yellow	399
Snapper	397	Granter	256
Trout	487	Guard on distribution of the alligator	142
Whale, California	31, 32	Guasa	411
Grayling	505	Gubartas	29
American and European, similarity of	506	Gundiach on abundance of Florida Manatee	123
distribution of, in Europe	506	Guebucu	337
name for Salmon	470	brasiliensibus	356
Great Herring	550	Guffer	247
Great Lake Pike	462	Guicheuot on distribution of Sword-fish	340
Graedigt	173	Gulf Menhaden	575
Green-bone, name for Mutton-fish	247	food of	577
Silver Gar-fish	458	messmates of	576
Green Crab	773	movements of	576

	Page.		Page.
Gulf Menhaden, popular names of.....	576	Halibut, Bastard.....	182
reproduction of.....	577	Chicken.....	178, 194
Gull-fish.....	228	Grey.....	194
Gumilla, on name of Manatee.....	116	Little.....	197
Günther, on the anatomy of the Mullet.....	449, 450	Monterey.....	182
classification of the Eel.....	629	Halichoerus grypus.....	65
distribution of Rose-fish.....	260	Halieyon richardsi.....	57
Pterasteridae.....	243	Halisarcoidea.....	844
history and habits of the Pilot-fish.....	320	Hall on Spawning of Mackerel.....	296
Lampreys.....	676	Hällefisk.....	191
the life history of the Eel.....	632, 633	Hälledundra.....	191
movements of the Gar-fishes.....	458	Hallock, Charles, on migration of Sea Bass.....	408
names of American Burbot.....	236	on distribution of Striped Bass.....	425
rate of growth of Sword-fishes.....	347, 348	Charles, on habits of the Bowfin.....	658
Scopelus family.....	547	on spawning habits of Black Bass.....	403
Thread-fish.....	279	Hamlin, on habits of Lake Trout.....	487
variations of Saibling.....	501	Hammer-head Shark.....	2/ 67, 67 6/
Gurnard family.....	255	Sucker.....	615
Gurnard, Flying.....	255	Hand-saw Fish family.....	547, 548
Grey.....	256	Hannahills.....	407
Red.....	256	Haplidonotus grunnicus.....	362, 370
Gurry Shark.....	674	Harbin.....	298
Gut-pock Herrings.....	550	Harbor Porpoise, food of.....	15
Haddle.....	234	destructiveness of.....	15
Haddock.....	223	distribution of.....	14
Haddock, abundance of.....	225	reproduction of.....	15
distribution of.....	223	size and movements of.....	15
food of.....	226	uses of.....	15
movements of.....	224	Seal.....	55
names of.....	224	general history and synonymy of.....	55
uses of.....	228	geographical distribution of.....	55
Norway.....	260	habits of.....	57
Haddob.....	476	Hard Clam.....	708
Hadow.....	224	Hard-head, name for Salmon.....	444
Hadot.....	224	Whale.....	21
Hag-fish, enemy of Halibut.....	182	Shad, Name for Menhaden.....	569
Hag-fish.....	682, 689, 681	Sponge.....	845
Hair Seals.....	37	Hard-mouth.....	618
Hairy-back Shad.....	610	Hard-tail.....	324
Hake.....	234	Harding, Capt. King, on abundance of Mackerel.....	290
distribution of.....	234	Harding, Capt. King, on food of Mackerel.....	291
habits of.....	235	Hare-lip.....	614
names of.....	234	Hare, Sea.....	18
uses of.....	235	Harlan, on abundance of Florida Manatee.....	123
California.....	243	American Manatees.....	114
Dame.....	234	size of Florida Manatee.....	117
King.....	234	Harmer, Thomas, on enumeration of eggs in Mackerel.....	298
Old English.....	234	Harp Seal.....	62, 65
Silver.....	240	Breeding.....	62
Squirrel.....	234	geographical distribution of.....	62
White.....	234	hunting, and products.....	63, 64
Half Herring.....	351	Turning.....	62
Half-beak.....	461	Young.....	62
Half-moon.....	395	Hart, M. A., on capture of Lampreys.....	680
Halibut.....	177	Harvest-fish.....	333
abnormal individuals among.....	197	distribution of.....	333
abundance of.....	193	Harwood on the nose of the Fur Seal.....	79
common names of.....	190	Haul-a-boat.....	101
distribution in N. W. Atlantic.....	191	Hawk's-bill Turtles.....	147, 149
food of.....	195	as food.....	150
migrations of.....	194	economic value, grades of.....	149
size of.....	193	shell of.....	149
spawning of.....	196		

	Page.		Page.
Hawk's-bill Turtle, food and habits of	149	Herring, Laid	551
range of	149	Little	579
size of	149	Michigan	541
Hecht	562	New York	579
Hector on Sword-fish in New Zealand	341	Norwegian	550
Heilbot	191	Norwegian Winter	550
Heiligebutt	191	Scotch Dutch	551
Helmet-shell	699	Skarp	550
Hemdurgan	260	Small	550
Hemilepidotus spinosus	259	Spiced	550
trachurus	259	Sprat	579
Hemirhamphus Rosa	460	Spring	579
unifasciatus	461	Summer	579
Hemitripteris, americanus	258	Tender	551
hiapidus	258	Tiny	579
Hen Clam	708	Toothed	612
Hen-fish family	335	Tribe	549
Henshall, J. A., on the Black Bass	401	Wall-eyed	580
Heptranchias maculatus	674	Herrings of the Pacific coast	568, 569
Herbert on the peculiarities of the Siscowet	496	River	579
Hermes, Dr. Otto, on reproductive organs of Con- ger-Eel	656, 657	Hessel, Rudolph, on the Carp	618-626
Hermit Crabs	779, 780	Heterodontus Francisci	674
Herrard on habits of, American Manatee	119, 120	Heterograpus nudus	765
on products of South American Manatee	127	oregonensis	765
on the pugnacity of Alligators	143	Heterostichus rostratus	251, 275
Herring	549	Hewlock-Powak	505
abundance and importance of	549	Hexagrammus asper	268
artificial propagation of	563	decagrammus	267, 268
capture and uses of	565, 566	lagocephalus	267, 268
effect of meteorological conditions on capture of	554, 555	ordinatus	268
fishery, alleged destructiveness of	566-568	Stelleri	267
food of	563-565	Hexanchus corinus	676
geographical distribution of	551-552	Hickory Shad	607
movements and migrations of	552-557	abundance of	608, 609
name for Char	501	geographical distribution of	608
Gulf Menhaden	576	names of	607, 608
Menhaden	569	reproduction of	609
names of	550	size of	609
periodicity of abundance of, on Euro- pean coast	557-559	Higginson, Francis, on abundance of Mackerel in 1629	289
reproduction of	559, 563	High-finned Killer Whale	17
Big-eyed	611, 680	Hind, H. Y., on abundance of Herring	540
Bleking	550	the causes of irregular movements Mackerel schools	300-1
Blue	579	distribution and abundance of Codfish	209, 210
Bohuslän	550	geographical distribution of Mack- erel	251
Boundary	550	migrations of the Mackerel	282
Branch	580	movements of Capelin	546
California	568, 169	Codfish schools	208
Cod	201	relations between Mackerel and Launce	292, 293
English	582	spawning Codfish	209
Fat	550	habits of the Capelin	545, 546
Fjord	551	Hind, Spotted	412
Glut	582	Hippa talpoida	779
Gottenburg	550	Hippocampus heptagonus	172
Gröben	550	hudsonius	172
Grass	550	ingens	172
Great	550	Hippoglossoides elassodon	188
Gut-pock	550	exilis	187
Half	151	Jordani	186, 187
Hogs	14	platessoides	197
Kulla	550		
Lake	541		

	Page.		Page.
Hippoglossus vulgaris	189	Hooded Seal, geographical distribution and migra-	
Hippolyte brevirostris	818	tions of	68-71
Hirudo medicinalis	835	habits of	71
officinalis	835	hunting and products of	71
parasite of Sword-fish	355	Hoopid Salmon	477
Histiophorus americanus	336, 337, 356	Horned Dace	617
gladius	336, 357	Dogfish	672
immaculatus	336	Eel	246
indicus	356	Pout	627
orientalis	336	Horness	246
pulchellus	336	Horny-head	617
Histriophoca fasciata	63, 67	Hors	326
fasciata	107	Horse Crevallé	323, 324
Hoe	673	Horse-fish, name for Blunt-nosed Shiner	322
Mother	667	Sauger	424
Hog-choker	177	Horse-head	323
Hegfish	275	Horse-mackerel	320
name for Log Perch	417	name for Black Candle-fish	268
Pigfish	398	Bluefish	433
Holacanthus ciliaris	280	California Hake	243
Holbrook on best fishing-grounds for Sheepshead	383	Jurel	324
breeding of Green Turtles	151	Horse, Sea	35
differences between Sea Bass and		Sponge	845, 848
Black-fish	408	Horseshoe Crab	829, 830
distribution of the Alligator	141	Horsewhale	35
Tautog	269	Houndfish, name for Bluefish	435
food and feeding habits of Green		Silver Gar-fish	459
Turtles	150	Blew	308, 435
the food of the Loggerhead Turtle	148	Speckled	308, 435
habits of the Crab-eater	444	Hubbard on abundance of Sperm Whale	9
habits of the Grouper	410	distribution of Atlantic Walrus	34
Sheepshead	382	Humaña	474
Spanish Mackerel	312	Humpback Whales	26, 27, 29
the Squirrel-fish	410	food of	26
the habits of the Whiting	376, 377	distribution of	26
Mobilianer	155	migrations of	26
mode of life of Alligators	144	in New England	27
origin of name of Alligator	141	size of	26
the Pig-fish	399	Hump-backed Salmon	476
range of Hawk's-bill Turtles	149	Butterfish	323
the Red-mouth Grunt	398	Hungarian Leech	837
size of the Alligator	142	Hunter and Woods on Sperm Whale in England	9
and mode of life of Bullfrog	159	Huxley, Prof. T. H., on abundance of Herring	549, 550
Holconotus Agassizi	278	alleged destructiveness of	
analis	278	the Herring fishery	567, 568
argenteus	278	distribution of the Cray-	
rhodoterus	278	fishes	812
Holia	476	the functions of the append-	
Holibut	191	ages of Cray-fish	792
Holocanthus tricolor	280	migration of Herrings	553
Holocentrum pentacanthum	361	spawning habits of Herring	559-562
Holothuria floridana	858	the structure of the Cray-	
princeps	838	fish	812, 813
Holybut	191	Hyaqua	703
Homarus americanus	781	Hyatt, Prof. A., on Florida and Bahama commer-	
capensis	783	cial Sponges	846-850
vulgaris	783	general structure of the Sponge	844
Home, Sir Edward, on development of the Lam-		the horny Sponges	844-846
prey	678	Hydroid Corals	841
Homer	667	Hyodon alosoides	612
Hone	476	selenops	612
Hooded Seal	65, 68	tergicus	612
food of	71	Hyodontidæ	612

	Page.		Page.
Hyodon tergisus	613	Johnson, Capt. G. A., on spawning of Halibut.....	196
Hyperaodon bidens	18	Jonah Crab	769
Hypleurochilus gentilis	251	affinities of	769
Hypomesus olidus	544	distribution and habits	769
Hypsopsetta guttulata	185	economic value of	770
Hypsurus Caryi	278	name of	770
Hysteroecarpus traski	279	Jones, J. Matthew, on abundance of Horse-Mack- erel	321
Iclichthys Lockingtoni	361	distribution of Sword-fish	341
Icosteus amignaticus	361	pugnacity of Spear-fishes	350
family	361	Jookoo	237
Ictalurus	626	Jordan, D. S., Prof., on distribution of—	
albidus	627	Agonida	258
nigricans	626, 627	Alaska Pollack	232, 233
ponderosus	627	Banner Pompano	329
punctatus	627	Barracouta	448
Ictiobus bubalus	615	Blue Pike	423
carpio	615	California Anchovy	612
cyprinella	615	Conger Eel	628
cyprinus	615	Flying-fish	459, 460
urus	615	Herring	568, 569
Idyla roseola	842	Pompano	334
Ikan jegan	338	Sardine	569
Ikan-layer	368, 357	Smelt	457, 544
Ilyanassa	696	Yellow-tail	331
obsoleta	693	Sparoids	394, 395
Imperador	337	Carp family	616-618
Ingersoll, E., on agencies destructive to Oysters ..746-748		Catfish family	626-628
on destructive influence of the Drum		Club Mackerel	303
on Oyster-beds	369	Corvinas and Roncadors of the Pacific coast	378-380
on interference of other animal life		Dolly Varden Trout	504, 505
with Oysters	746, 749	Flat-fishes and Soles of the Pacific coast	184-189
on Oyster culture	732, 733	Fresh-water Drum	370
Inland Alewife	594	Hag-fishes	681
Inshore Cod	201	Inland Alewife	594
Isogomphodon maculipinnis	677	King-fish	316
Isophyllia dipsacea	641	Little Tunny	322
Isopods	826, 827	Log Perch	417
Isurus, sp	677	Long-finned Tunny	320
Ivory Barnacle	828	Mullet in California	456
Jack, name for Bocaccio	266	Parrot-fish	275
Jurel	324	Pacific Bonito	319
Pickerel	464	Tom Cod	223
Wall-eyed Pike	418	Pike Perches	417
Buffalo	324	Quinnat Salmon	479, 480
Salmon	418	Ratfish	662
Jackson, J. B. S., on Sperm-Whale grounds	8	Rock Cods of the Pacific	262-267
Jacobs, Solomon, on migrations of Mackerel	287	Trouts	267, 268
Jacoby on discovery of female Eel	636, 638	Salmons of the Pacific	474-479
the external characteristics of Eels	644, 645	Sauger	424
natural history of the Eel	652-655	Serranoid fishes of the Pa- cific Coast	413
search for young Eels	646	Sharks of the Pacific Coast	674-676
Jelly-fish, food of ocean Sunfish	169	Sturgeons of California	662
Jelly-fishes	841, 842	Sucker family	614-616
Jorker	617	Sunfishes and their allies	404
Jew-fish	413	Surf-fish family	276-279
name for Black Grouper	411	Surf Smelt	544
Tarpum	611	Sword-fish	341
Jewel-head	370	Tile-fish family	361
Joe Rocker	774	Wall-eyed Pike	417
John Dory	335	Whitefishes	541-543
name for Rose-fish	260		
Johnny	259		
Grindle	658		
Verde	413		

	Page.		Page.
Jorobado.....	322	Klippfisk.....	200
Joselyn on the Alewife, 1675.....	583	Knife-handle.....	707
size of Mackerel, 1675.....	299	Knight on food and feeding habits of Green Tur-	
Joyce, Capt. Hanson B., on migrations of Mack-		tles.....	151
erel.....	288, 289	habits of Yellow-bellied Ternapiu.....	155
Juhnret.....	29	Kogia Floweri.....	11
Jubartes.....	29	Köhler.....	228
Jubartus.....	29	Kotickie.....	82
Jukes, Professor, on distribution of Ringed Seals.	65	Krasnaya Ryba.....	477
food of Hooded Seal.....	71	Kraut.....	133
Jumper.....	401	KDa-why.....	476
Jumping Mullet.....	449	Kulla Herring.....	550
June Mullet.....	451	Kuhound.....	501
Jupiter.....	29	Kundien, L., on Lake Trout.....	493-496
Jupiter Fisch.....	29	Muscallonge.....	464-466
Whale.....	30	Pike.....	463, 464
Jupitervissh.....	29	White Bass.....	428-431
Jurel.....	324	Whitefish.....	536-540
Cuba.....	325	Yellow Perch.....	414-417
Juruca.....	150	Ringed Seal.....	80
Kabeljaanw.....	200	Halibut.....	192
Kailleraglik.....	197	Seals in fresh water.....	59
Kapuatnik.....	133	Hooded Seal.....	69, 70
Kaskelot.....	7	Ringed Seals.....	664
Kassiarsoak.....	59	Salmon in Lake Ontario.....	473, 47
Kassigiak.....	59, 66	Kuth.....	228
Kayko.....	476	Kyack.....	582
Kazilot.....	7	Kyauck.....	582
Keela Lauk.....	18	Laberdan.....	200
Keethie.....	173	Laehnolemus falcatus.....	275
Reghie.....	173	Lady Crab.....	774, 775
Keithok.....	173	Lady-fish.....	612
Kelp Crab.....	778	family.....	612
Kelp-fish of California.....	275	Lafayette.....	370
Kelp Salmon.....	413	Lagartos.....	141
Kemp, E. W., on distribution of West Indian Seal.	67, 68	Lagenorhynchus obliquidens.....	16
Kemps, Capt. David, on abundance and habits of		perspicillatus.....	16
Mullet.....	452, 453	Lagocephalus lævigatus.....	170
Kerato-Silicioidea.....	844	Lagodon rhomboides.....	393
Keratoidea.....	844	Lake Cusk.....	236
Kerr, J. W., on food of White-fish.....	516	Herring.....	541
spawning of White-fish.....	523	Salmon.....	487
Kettlemaw.....	173	Sturgeon.....	660
Kiel, Peter, on food of White-fish.....	516	Trout.....	485, 504
spawning of White-fish.....	522, 523	Trout, culture of.....	491-493
Killer Whales.....	12, 17	enemies of.....	491
annoyance to whalers.....	17	food of.....	490
destructiveness of.....	17	importance of.....	488
habits and distribution of.....	17	names of.....	488
uses of.....	17	principal spawning grounds of.....	480, 490
Low-finned.....	17	size of.....	486
Killifish.....	466	spawning of.....	488
King Cero.....	307, 316	varieties of.....	486-488
King Crab.....	629, 630	White-fish.....	507
King-fish.....	375	Laker.....	487
name for Cero.....	316	Lamantin.....	116
Whiting.....	377	Lamellaria perspicua.....	693
King Hake.....	234	Lamellibranchiata.....	703
King Salmon.....	479	Lamna cornubica.....	676
Kipper.....	468	cornubica.....	676
Kisutch.....	477	Lamper Eel, name for Mutton-fish.....	247
Kirtland, J. P., on breeding habits of the Sunfish.	405, 406	Eels.....	676
habits and value of Grass Bass.....	407	Lampighter.....	406
Kispiyda.....	69	Lampreta.....	676

81
~~676~~ 670, 676
 7

	Page.		Page.
Lamprey, economic uses and capture of.....	679, 680	Lepidosteidae.....	662
spawning season of.....	678	Lepidosteus osseus.....	622
Lampreys.....	677-684	platystomus.....	663
Lamprididae.....	335	spatula.....	663
Lampris guttatus.....	335	Lepomis cyanellus.....	406
Lamproie.....	676	gibbosus.....	405
Lancelets.....	681	Holbrookii.....	406
Land-snails, edible.....	701, 702	innuatus.....	406
Lauman, Charles, on capture of White-fish in the		megalotis.....	406
Grand Lake.....	536	notatus.....	406
economic value of the Bur-		pallidus.....	406
bot.....	240	punctatus.....	406
feeding habits of the Bur-		Leptagonus verrucosus.....	258
bot.....	239	xyosternus.....	258
geographical distribution of		Leptocottus armatus.....	259
Shad.....	594, 595	Leptocephalus conger.....	655
on spawning habits of the Capelin.....	545	Leptops.....	626
value of Capelin.....	546	olivaris.....	626, 627
varieties of Lake Trout.....	487	Lerneans, parasites of Sword-fish.....	354
Lant.....	244	Leucorhamphus borealis.....	16
distribution of.....	245	Peronii.....	16
habits of.....	244	Lewis, on abundance of Haddock.....	225
uses of.....	246	Libinia dubia.....	778
Lard Herring.....	551	emarginata.....	778
Latilidae.....	360	Lienophora Cohnii.....	734
Launce.....	244	Limanda aspera.....	184
Lavinia exilicauda.....	618	ferruginea.....	184
Lawyer.....	236	Rough.....	184
Leather Carp.....	619	Limnea.....	694
Leather-jacket.....	332	Limnoria, Boring.....	826
habit of stealing bait.....	172	lignorum.....	826
name for File-fish.....	172	similar to Boring Amphipod.....	825
Leather Turtle.....	147	Limulus polyphemus.....	829
Le Baron, J. F., on mode of capturing Manatee.....	124, 125	Lindahl, Josua, on periodicity in movements of	
Leda tenuisulcata.....	703	Herring in Europe.....	557, 558
Leech, culture of.....	835, 836	Ling, name for Burbot.....	236
ponds, American.....	836	Cobia.....	444
structure of.....	833	Cultus Cod.....	267
use of.....	836	Hake.....	234
varieties of.....	836	Mutton-fish.....	247
American, cultivation and economic value		Liocottus hirundo.....	259
of.....	834, 835	Lion, Sea.....	37, 38
distribution and structure of.....	833	Liostomus xanthurus.....	370
medicinal.....	833	Liparididae.....	253
European.....	835	Liparis lineatus.....	253
German.....	837	pulchellus.....	255
Gray.....	835	vulgaris.....	253
Green.....	835	Lirus periformis.....	334
Hungarian.....	837	Little Drum.....	367
Spanish.....	837	Halibut.....	197
Swedish.....	837	Herring.....	679
Leeches.....	833-837	Mackerel.....	305
Legateer.....	141	Neck Clam.....	708
Leidy, on cause of green color of Oysters.....	738	Roncador.....	379
the living Sponge, in Ostrea virginiana.....	750	Smelt.....	457
the range of American Manatee.....	110	Sunny.....	322
Le-Kai.....	476	Littorina.....	693
Leo marinus.....	39	Ljungman, on annual migrations of Herring	
Leopard Seal.....	59, 73	schools.....	555-557
Shark.....	67	geographical distribution of Her-	
Lepas fascicularis.....	628	ring.....	551, 552
Lepidogobius gracilis.....	255	migrations of Herring.....	552, 553
Lepidopsetta bilineata.....	185	names of Herring.....	550
Lepidopus caudatus.....	336	Lob-Keling.....	228

INDEX.

	Page.		Page.
Lobo marino	48	Loggerhead Turtle, distribution of.....	147
Lobotes surinamensis.....	444	economic value.....	148
Lobster	780	food of.....	148
American.....	781	rate of growth.....	148
name of.....	783	size of.....	148
Berried.....	783	Loggerheads.....	147
Black.....	783	Pealei.....	349, 687
European, development of.....	802-804	Long-boned Shad.....	279
distribution and habits of.....	807-811	Long Clam.....	707
Rock.....	780, 783	Long-eared Sun-fish.....	406
School.....	783	Long-finned Sole.....	188
Soft-shell.....	783	Tuunoy.....	320
Spiny.....	780	Long-nosed Gar-pike.....	662
Lobsters.....	780-812	Look-down.....	323
association of males and females.....	789-790	Lopholatilus chamaeleonticeps.....	360
average size at present.....	783-784	Lophopsetta maculata.....	179, 199
bathymetrical range of.....	787	Losh.....	236
casting a claw.....	805-806	Lost Salmon.....	476
character of the bottom preferred by.....	787-788	Lota broamiana.....	236
color of.....	785-786	inornata.....	236
composition of.....	811-812	maculosa.....	235, 236
decrease in size of.....	783	enemy of Alewives.....	592
deformities and diseases of.....	806	vulgaris.....	236
designations of spawn of.....	798	Low-finned Killer-whale.....	17
destruction by storms.....	807	Luccio.....	462
development of the young.....	979	Lucioperca borea.....	424
distribution and geographical range of.....	786-787	canadensis.....	424
enemies of.....	806-807	grisea.....	424
extrusion of the eggs, etc.....	798-799	Lump-fish.....	253
food of.....	804-805	distribution of.....	254
in fresh and brackish water.....	787	Lump-suckers.....	253
growth, shedding, etc., of.....	791-794	Lumpenus anguillaris.....	251
habitats while spawning of.....	797	Lunatia groenlandica.....	693
large.....	784-785	heros.....	693
migrations of.....	783	heros.....	700
movements of.....	790-791	immaculata.....	693
number of eggs in.....	798	Lunge.....	487
off-shore range of.....	787	Black.....	487
parasites of.....	806	Racer.....	487
pairing of.....	797	Silver.....	487
rate of growth of.....	794-795	Lupton, N. S., on breeding habits of salt-water	
relations and structure of.....	781-783	Cat-fish.....	628
reproduction of.....	795-796	Luth.....	147
schooling of.....	789	Lutjanus autolytus.....	397
shedding after spawning.....	799	Blackfordii.....	395
size of spawning.....	797	campechianus.....	396
spawn as food.....	798	caxis.....	236
spawning season of.....	796-797	caxis.....	397
transplanting the young of.....	804	Stearnsii.....	396
winter habits of.....	790	torridus.....	396
Lobster's Tail, name for Land Snail.....	701	Lütken on distribution of Sword-fish.....	341
Loche.....	236	geographical distribution of Rose-fish.....	261
Lockes Cod.....	413	Luzzo.....	462
Lockington on the Glyptocephalus zachirus.....	189	Lybecker on periodicity of Herring in Europe.....	558
Hippoglossoides Jordani.....	187	Lycodes family.....	247
Parophrys ischyurus.....	185	Lycodidae.....	247
Lockwood, Rev. Samuel, on habits of Sea-horse.....	172	Lycodopsis microstomus.....	248
tongue of the Drill.....	696	paucidens.....	248
Lödde.....	544	Lyell, Sir Charles, account of battle between por-	
Lödde-Fisk.....	205	poise, and alligators.....	15
Log-fish.....	334	on habits of Cow-fish.....	16
Log Perch.....	417	Lyman, Col. Theo., on abundance of Tautog.....	271
Loggerhead Turtle.....	147, 153	spawning of the Sea-robin.....	256
breeding habits of.....	148	Lyon, George, on capture of Lampreys.....	679-680

2/

	Page.		Page.
Lysanger	261	Malthoidea	173
Lysiosquilla glabriscula	823	Manatee, names of	116
Lytle, A. H., on movements of Branch Alewife	592	mode of capture	123, 124
McDonald, Marshall, on the Hickory Shad	607-609	probability of extinction of	123
Shad	594-599	products furnished by	127
Shad and Alewives	579-588	size and weight of	117
Macharoplax obscura	693	American	114
Mackerel, abundance of	289, 290	boundaries of the range of ..	116
and its allies	281, 300	early allusion to habits of,	
enemies of	299-300	by Columbus	119
food of	290-294	Florida, abundance of	122, 123
geographical distribution of	281-282	distribution of	114
hibernation of	284	size of	117
migrations of	282, 283-289	North American species of	114
spawning grounds of	302, 303	South American, abundance of	123
rate of growth and size of	298, 209	distribution of	115
reproduction of	294-298	size and weight of	117
schools, studies of the movements of ..	300	West Indian	115
Atka	286	Manati	116
Big-eyed	303	Manatus antiquus	116
Bull	303	australis	114
Chub	303	inornatus	116
Frigate	305	latirostris	115
Guide	458	Manaty	116
Little	305	Man-eater Shark	670, 671
Mixed	304	Manentine	116
Monterey	316	Mangrove Snapper	306, 307
Shark	644	Manicina areolata	841
enemy of Mackerel	299	Manta birostris	636
Skip	433	Mantis, Sea	823
Snapping	433	shrimp	823
Spanish	307	Manuani	683
Thimble-eye	304	Mar, Captain Chester, on food of Mackerel	291-292
Sinker	304	migration of Codfish ..	210
Yellow	324	Marbled Angler	173
Mackinaw Trout	48	Margarita argentata	693
Mackinnon, Captain, on Turbot in America	176	cinerea	693
Macoma nasuta	708	grœnlandica	693
sabulosa	703	Margate fish	394
Macrobdella decora	833	Marine Tortoises and Turtles	147
Macrochelys	153	Turtles, species of commercial importance ..	147
lacertina	153	Worms	831
Macrorhinus angustirostris	72	Market fish	394
leoninus	73, 74	Maroon Eel	247
Macruridae	244	Marphysa sanguinea	833
Macrurus Bairdii	244	Marse Banker	569
rupestris	244	Marshbanker	569
Macy, Zacheus, on former abundance of Sperm		Marsoon	18
Whale	8	Marsuin	14, 18
on the Scrag Whale	31	Marten on distribution of White Whale	18
Mademoiselle	375	Marthy	236
Madrepora cervicornis	841	Mascoka	370
palmata	841	Masters, Peter, on abundance of Mullet at Saint	
prolifera	841	Angustine	453
Maigre	368	Matajuelo	361
Malacoclemmys geographica	156	on the colors of Grayling	507
Lesueurii	156	Mather, Fred., on destructiveness of the Drum	398
palustris	156	Jelly-fish	842
Mallotus villosus	207, 544	Richard, on abundance of Mackerel in	
Malm, on date of capture of Cat-fish	250	1635	939
Malma	504	extract from journal	13
Malmgren, on distribution of Hooded Seal	70	Maties	660
habits of Ringed Seals	66	Matkah	89
Malthe vespertilio	172	Matto wacca	607

← Mananose

70/

6/

	Page.		Page.
Maulrush	228	Milaktok	62
Maximilian, Prince, on distribution of South American Manatee	115	Millepora albicornis	841
May Sucker	614	Miller's Thumb	250
Maynard, C. J., on distribution of Florida Manatee	115	Millet on food and voracity of the Sabbling	504
Meandria elivosa	841	Milner, J. W., on artificial propagation of White-fish	523-528
labyrinthiformis	841	the Chief Mountain White-fish	542, 543
sinuosa	841	culture of White-fish	529-535
Medialufa	395	development and rate of growth of White-fish	519-522
Medregal	331	distribution of the Eel	632
Medusa	841	enemies of Lake Trout	491
Meerbecht	242	enemies of White-fish	512, 513
Megalops thrissoides	610	food of the Grayling	506, 507
Megaptera osphyia	26	White-fish	513-516
versabilis	26	general habits and history of Lake Sturgeon	660, 661
Melampus	694	the habitat of the Michigan Gayling	506
bidentatus	701	habits of the speckled trout	499
Melanogrammus aeglefinus	433	importance of Lake Trout	488
Menhaden	509	improved methods of shipping eggs of White-fish	529-531
abundance of	573	the Lamprey as a parasite	679
distribution of	570	movements of White-fish in the Great Lakes	509-512
enemies of	574	parasites of White-fish	535
food of	573-574	size and weight of Lake Trout	491
movements of	570-573	spawning grounds of Lake Trout	489, 490
names of	569-570	spawning habits of Lake Trout	488, 489
reproduction of	573		
uses of	574-575	Minister	627
Gulf	575	Mimulus cornutus	617
Menidia notata	456	Minnov, name for Mummichog	466
Menippe mercenarius	772	Rot-gut	618
Menomonee White-fish	541-542	Minnows	616
Menticirrhus alburnus	376	Minnys	276, 278
littoralis	376	Mirror Carp	619
nebulosus	375	Mishcuppauq	386
undulatus	379	Missouri Sucker	615
Merchant, Capt. E. W., on abundance of Haddock	225	Mitchill, on habits of the Sheepshead	382, 383
Pollock	229	the Hammer-head Shark	671
Cod-fish schools	205	history of the Chub Mackerel	303
food of Mackerel	292	Spanish Mackerel	308
the uses of the Hake	235	Sword-fish	340
Merlangus carbonarius	231	Tautog	269
vulgaris	241	Tautog fishing	272, 273
Merluccio	240, 243	term of continuance of the Sheepshead	380, 381
Merluccius bilinearis	240	and Field on abundance of Salmon	469
merlus	240	Mixed Mackerel	304
productus	243	Mnemioopsis Leidy	842
vulgaris	240	Mobilianet Terrapin	155
Mermaid-fish	171	Möbius, Professor, on food of Herring	565
Mérou	267	reproduction of European Oyster	720
Methy	236	Modiola capax	709
Meunier, on overfishing for Sword-fish in the Mediterranean	349	hamatus	709
reproduction of Sword-fish	350	mediolus	703, 709
Michigan Grayling, artificial propagation of	507	plicatula	709
Herring	541	Modiolaria discors	703
Microgadus proximus	223	Moharra	276, 278
tomcod	223	family	279
Micropogon undulatus	378	Mongrel White-fish	541
Micropterus Dolomieu	401		
enemy of Alewives	592		
salmoides	401		
enemy of Alewives	592		
Microstomida	543		

81

	Page.		Page.
Monk-fish	171, 173	Mullet, Roe	451
Mola	169	Sand	449
Moll	269	Sea	453
Molligut	173	Silver	449
Mollusks	687	Striped	449
dyes from	699	White	449
shells for cameo-cutting	699, 700	Mulletts	449
Wing-footed	702, 703	Mummichog	466
<i>Molva Huntia</i>	236	family	466
<i>vulgaris</i>	236	Bluefish	449
Molyneux on Sperm Whale in England	9	<i>Muraena nigra</i>	629
<i>Monocanthus setifer</i>	213	Muraenidae	628
<i>Monodon monoceros</i>	19	<i>Muraenoides ornatus</i>	251
Monterey Halibut	182	Murie, Dr., on food of Sitenians	119
Mackerel	316	size of South American Manatee	117, 118
Moon-eye	541-613	Murray, Andrew, on Bowhead Whales	20
family	612, 613	distribution of Right Whales	25
Moon-fish	445	Sperm Whales	7
name for Blunt-nosed Shiner	322	Muscallonge	464
range of	445	abundance of	464-466
Silver	323	Musk Tortoise	152, 154
Moore, C. R., on abundance of Spanish Mackerel	312	characteristics of	154
Moray, speckled	624	distribution of	154
Morays	624	Masquaw River White-fish	541
Morina	250	Mussel Digger	31
Morse	34, 35, 36	Mussels	709
Mortimer, C., on pugnacity of Sword-fish	351	uses of	710
Morue	200	<i>Mustelis canis</i>	236
verte	200	<i>Mustelus californicus</i>	673
Moss Bass	401	<i>canis</i>	673
Mossbunker	569	Mustet	244
Mother of Eels	236	Musteta	244
Mottled Grampus	14	Mutton-fish	247
Mountain Trout	475	<i>Mya arenaria</i>	703
name for Black Bass	401	<i>Mycedium fragile</i>	841
<i>Moxostoma macrolepidotum</i>	614	<i>Mycteroperca brunnea</i>	413
Mucqua	497	<i>falcata</i>	413
Mud Bass	405	<i>microlepis</i>	413
Cat	627	<i>stomias</i>	413
Crabs	772	<i>Myctophum crenulare</i>	547
Mud-dab	182	Myers, W. E., on the Mullet in Saint Mary's River	453
Mud-fish	654	Mykiss	474
Mud Shad	610	Myliobatidae	665
Suckers	615	<i>Myliobatis californicus</i>	666
Muffle Jaws	259	Fremenville	665
Mugil albula	449	<i>Mylochilus caurinus</i>	617
<i>brasiliensis</i>	449	<i>Mylopharodon conocephalus</i>	617
Miller, August, on the development of the Lamprey	678	<i>Myriolepis zonifer</i>	268
great Northern Expedition	129	<i>Mytilus edulis</i>	703, 709
Mullet, abundance of	450, 451, 452	<i>Myxine glutinosa</i>	680
in California	456	Myxinidae	680
Eastern Florida	450-453	Namaycush	485
general habits of	449	Narwhal	19
movements of	451	distribution of	19
names of	449	size, uses, &c.	19
in Saint Mary's River	453	<i>Naesulus</i>	733
Southeastern Florida	453	<i>Natica</i>	696
value of	452	<i>clausa</i>	693
Big-eyed	449	Native Cod	201
Black	375	Seal	59, 85
Fat	451	<i>Naukrates ductor</i>	330
Finger	453	<i>Nautichthys ocnofasciatus</i>	259
Jumping	449	Needle-fish	458
June	451	Neill, Mr., on the Mutton-fish	248

	Page.		Page.
Neitsek	65, 66	Oligoplites saurus	332
Nejou ōgou	676	Olivella biplicata	699
Nelson, E. W., on the Blackfish of Alaska	466, 467	dama	699
Neoclinus Blanchardi	251	gracilis	699
satiriens	251	Oliver on the habits of the Lant	245
Neoliparis mucosus	255	Ombre Chevalier	501
Neptanea despecta	693	Ommastrephes illecebrosus	687, 690
Nereis limbata	832, 833	enemy of Mackerel	299
virens	831, 833	Oncorhynchus chouicha	479
Nerimartout	69	gorbuscha	476
Neunaŭge	676	keta	476
Neunaŭgel	676	kisutch	477
Neverita duplicata	700	nerka	477
New England Whiting	240	quinnat	480
New Light	407	Onion-fishes	244
New York Herring	579	Opah family	335
Newfoundland Turbot	177	Ophichthys chrysops	628
Nigger Chub	618	ocellatus	628
Night Cod	214	Ophidiidae	243
Nielsen and Muller on Sea-Bears	52	Ophidium marginatum	243
Nine-eye	677	Taylori	244
Nippers	273	Ophiodon elongatus	267, 268
Nordenskiöld on extinction of Rhytina	135	Orange File-fish	171
Norris, Thad., on beauty of young Salmon	472	Rockfish	265
habits and size of White Perch	432	Orbicella annularis	841
manner of fishing for Sheephead	383	cavernosa	841
the size of the Salmon	473	Orea atra	17
North, Christopher, on the "perfect fish"	473	gladiator	17
Northern Fur Seal	49	rectipinna	17
figures of	53, 54	Orchestia agilis	824
general history	51	Oreynus alalunga	320
size of	51	alliteratus	322
Northwest Whale	24	argentivittatus	320
Norway Haddock	260	pelamys	316
Norwegian Herring	550	thynnus	320
Winter Herring	550	enemy of Sword-fish	354
Noscononge	466	similar to Frigate Mackerel	306
Notemigonus chrysoleucus	616	Oregon Finer	30
Noturus flavus	627	Ormer-shells	700
Nucula proxima	703	Orthagoriscidae	169
tennis	703	Orthagoriscus mola	169
Nurse-shark	677, 678	Orthodon microlepidotus	618
Nye, William, on pugnacity of Sword-fish	353	Osmerus dentex	544
Oar-fish	449	eperlanus	543
Obispo Ray	663	mordax	543
Ocean Kingfish	337	spirinchus	544
Sun-fishes	169	thaleichthys	544
Octopus granulatus	637	Ostracion bicaudalis	171
Ooulina diffusa	841	quadricornis	171
Odobanidae	33	trigonis	171
Odobaeus obesus	34	triqueter	171
rosmarus	34	Ostraciontidae	170
Odontaspis littoralis	677	Ostrea edulis	703, 711
Odontopyxis trispinosus	258	virginica	703, 711
Odotonia striatula	694	rate of growth of	725-729
Ogilby on breeding habits of Manatees	118	Oswego Bass	401
the Sucking-fish as a fisher	446, 447	Otaria	37
Oil Shark	677	californiana	45
Okow	418	jubata	38, 44
Old English Hake	234	leonina	52
Old Man	65	ursina	54
Oligocottus analis	259	Otarics	37
globiceps	259	Otariidae	33
maculosus	259	Otolithus thalassinus	364

u.s.?

	Page.		Page.
Otsego Bass	507	Packard, Dr., on geographical distribution of	
Outaouen	547	Hooded Seal	69
Oviedo on name of Manatee	116	Paddle-fish	67
Owen, Prof. R., on the power of Sword-fishes....	345	Pagophilus groenlandicus	70
Owl, Sea	254	Painted Clam	708
Oxylebiscus pictus	268	Palæmon chionis	819
Oyster	711	Palæmonetes exilipes	819
Oyster-banks, natural and artificial	750-758	vulgaris	818
characteristics of	750, 751	Palinurus vulgaris	780
positions of the spat in	751, 752	Paludina	694
Oyster-beds, artificial, establishment of	752, 753	Pandalus borealis	819, 820
cause of green color of	735-742	Dana	821
experiments at		leptoceros	819, 820
Washington and		Montagni	819, 820
Philadelphia	735	propinquus	819, 820
characters of the larval shell	728	Panganaut, Tanwock	201
coarser anatomy of	711-715	Panopeus depressus	772
colors in different parts of	740-742	Harrisii	772
culture, influences of environment on	732, 733	Herbstii	772
situations best adapted for	731, 732	Sayi	772
discrimination of sexes of	722, 723	found in stomach of Sea-robin	256
early stages of development of	726	Pantosteus platyrhynchus	615
experiments on, at Saint Jerome's Creek	727	Panulirus interruptus	780
food of	729-735	Paper-shell	776
observations at Saint Jerome's		Paralepidae	548
Creek	729-731	Paralepis borealis	548
influence of temperature on	743, 744	coruscans	548
impregnation of the eggs of	723-725	family	548
interference of other animal life with	748-750	Paralichthys dentatus	176, 177, 178, 182
local variations in form and habits of	742-744	maculosus	182
manner of taking on flesh and reproduction of	755-758	oblongus	181
methods of distinguishing sexes and taking eggs of	722-725	quadrocellatus	181
minute anatomy of	715-719	stigmatias	182
mud and fry of	747	Parkhurst, on the Capelin	544, 545
physical and vital agencies destructive to	746-750	Parnell, on economic value of Cat-fish	250
and its prey, mutual relation between	734, 735	on the Mutton-fish	247
rate of growth of	728, 729	uses of the Lump-fish	254
sex, sexual products, and difference of		Red Gurnard	256
sexual habits in American and Eu-		Parophrys ischyryus	185
ropean	719-722	isolepis	186
size of the egg of	725, 726	vetulus	185
spat collectors	753, 754	Part	228, 468
variations in color of	735, 736	Parrot-fish, Blue	274
the shell of	743	Parrot-fishes and some of their allies	274, 775
young, food of	728	Pasture school	201
larval character of	727, 728	Paugy	386
Crab	765, 766	Pauzy, Dr., on sex of Eels	649
development of	745, 746	Peacock-fish	338
as a messmate and purveyor	744-746	Peal	468
quadruple commensalism of	744, 745	Pearob	406
European experiments upon	740	Pece-Buey	128
fish, name for Tautog	289	Pecten irradians	703, 709
Toad-fish	251	islandicus	703, 709
Raccoon	752	tenuicostatus	703, 709
Pacific Bonito	319	Peelers	776
Finback	30	Pega de las Agujas	446
Lycodids	248	Pegebuey	116
Tom Cod	223	Penens brasiliensis	821
Walrus, size of	35	setiferus	821
distribution of	35	Pennant, on abundance of Alewives	584
habits of	35, 36	feeding habits of the Burbot	239
		Pensacola Rock Salmon	331
		Snappers	398

	Page.		Page.
Pentacta frondosa	838	Phoca nummularis	57
Percia americana <i>592</i>	239, 414	Petrovi	107
<i>navialis</i> , enemy of Alewives	592	proboscidea	74
Perch, name for Black Bass	401	vitulina	55, 57, 63, 65, 73, 82, 107
Chogset	273	Phocæna brachycion	14
Drum	370	Phocærtos Hookeri	38
Surf-fish	276	Phocida	33
Black	444	Pholads	707
name for Surf-fish	278	Physa	694
Blue	277	Phyeis blennioides	234
Chinquapin	407	Chesteri	234
Gray, name for Drum	370	causs	234
Log	417	Earlly	234
Pike	417	regius	234
Red	260	tennis	234
Ringed	414	Pickeral	421, 424, 462, 464
River	279	Brook	464
Sacramento	405	Gray	421
Silver	375	Salt	418
Striped	417	Yellow	421
White	277, 424, 431	Pickering	424
name for Drum	370	Pickers	201
Yellow	414	Piddocks	707
Percina caprodes	417	Pienbo, Paul, on prices of Bull-frogs in Cali- fornia	161
Peristedium miclatum	257	Pig-fish	398
Periwinkle	694	name for Sculpin	258
Perley, M. H., on distribution of Halibut	192, 193	Pig-fishes	397
the Pollock	228	Pig, Snuffing	14
the habits of the Hake	235	Pigny Sculpin	258
migrations of Mackerel	288	Pike	461
movements of Pollock	230	family	461-466
movements of the Silver Hake	242	Blue, name for Pike Perch	417
names of Hickory Shad	608	Gray	424
the uses of the Lump-fish	254, 255	Great Lake	462
Permit	321	Green, name for Pike Perch	418
Pesce-spada	337	Ground	424
prêtre	266	Nicholas, on habits of Spear-fishes	358
verniglia	264	Perches	417
Pescerey	275	Sacramento	617
Peters, on abundance of Salmon	469	Sand	424
Petricola pholadiformis	703	Spawn	421
Petromyzon americanus	676	Wall-eyed, name for Pike Perch	417
argenteus	679	Yellow	421
branchialis	676	name for Pike Perch	417
fluvialis	678	Pilcher	569
marinus	674, 679	Pilot-fish	330
Plaveri	677, 678	Whales	11
Petromyzonidae	676	Piltock	296
Pez Colorado	372	Pin-fish	340, 343
de spada	337	Pine-barren Terrapin	158
Philine lineolata	694	Pine-tree Cod	201
Phillips, Barnet, a criticism on the essay "First families of the Atlantic"	282, 283	Pinnipedia	33
Phoca Ausoni	74	Pinnipeds	33
barbata	65	Pinnotheres maculatum	706
hyrodi	74	ostreum	705
canina	57	Pipe-fish, appearance and size	172
dorsata	63	family	172
elephantina	74	geographical distribution	172
foetida	59, 63, 65, 107	habits	172
greenlandica	62, 63, 65	Pipe-fishes	169
Isidorei	70	Piper	257
leonina	74	Piscator, on Alewife in the Saint Lawrence River	529

Psentonym of a writer in Ford & Stearns.

	Page.		Page.
Piscator, author of "Practical Angler," on economic value of the Gurnard.....	257	Polyodontidæ	659
Piscis Jovis	29	Polyp Corals	641
Piso, on the history of the Sail-fish.....	356	Pomacentridæ	275
Plaice.....	176, 178, 186	Pomacentrus rubicundus	276
fishery	179, 180	Pomatomidæ	433
Plain Bonito.....	306	Pomatomus saltatrix	433
Planorbis	694	Pomfret.....	335
Platydon cancellatus	707	Pomodasys fulvomaculatus	398
PlatyGLOSSUS bivittatus	274	Pomoxys annularis.....	407
radiatus	274	sarroides	406
semieinctus	275	Pompano, African	427, 329
PlatyGobio gracilis	617	Banner	327, 329
Platyonichus ocellatus.....	774	California	334
food of Mackerel.....	290	Carolina	326
Platypeltis ferox	152	Common	327
PlatySOMATICHTHYS hippoglossoides.....	177, 197	Gaff-topsail	329
Pleurobrachia rhodactyla.....	842	Round	327, 329
Pleurogrammus monopterygius.....	268	Shore.....	329
Pleuronectes glaber	183	Pompanos.....	326
glacialis.....	184	Pompilus	330
stellatus.....	184	Pond Tortoises	152, 154, 157
Pleuronichthys cœnosus.....	189	Pookagen	569
quadritaberculatus.....	189	Porbeagle	609
verticalis	189	Porcupine Fish, appearance, habits, voice	170
Pliny, on the Sword-fish.....	338	geographical distribution	170
Poddie	228	fishes.....	170
Podley	228	Porgee	276, 277
Podling	228	name for Moon-fish	445
Podothecus acipenserinus.....	258	Three-tail.....	445
vulens.....	258	Pergies of the Gulf	394
Poey on distribution of Sword-fish	341	Porgy, name for Porcupine Fish.....	170
movements of Spear-fishes	358	name for Scup.....	396
size of Black Grouper.....	412	Goat's-head	393
Poggys.....	21	Sheepshead.....	394
Pogonidæ	357, 569	White-boned	394
Pogonias chromis	367	Porichthys porosissimus	253
fasciatus	367	Poriferata.....	843, 844
Pogonichthes macrolepidotus	617	Porifera.....	843-850
Pogy, name for Menhaden	569	Porpoise.....	18
Moon-fish	445	Atlantic.....	14
Scup	387	Bay	14
Snrf-fish.....	276	Right Whale.....	16
Poisson bœuf.....	116	Skunk	16
rouge	372	Sperm Whale.....	11
Polar Whale	20	vomerina	14
Pole Flounder	177, 178, 188	Harbor	14
Polistotrema, enemy of Cultus Cod	268	Pristipomatidæ	395
Rock Cod.....	263	Pot-belly Trout	488
Stouti.....	681	Potomac River, observations of temperature taken, 1881	602
Pollachius carbonarius	228	Potfisk	7
chaleogrammus.....	232	Potter <i>Barcaplan</i>	154
viridis	228	Pottfisch	7
Pollack	223	Pout, Horned	629
Polliwogs	160	Potviseh	7
Pollock	228	Prawn, California.....	821
distribution of.....	228	common	818, 819
habits and food of	229	Prawns, Deep-water.....	819-821
reproduction of	230	Preestl.....	475
uses of	231	Pricke	676
raw	228	Prid	679
Polynemidæ	279	Pride	679
Polynemus octonemus	279	Prinkle	226
Polyodon spathula.....	659	Prionotus	255

	Page.		Page.
<i>Prionotus palmipes</i>	255, 256	Raed-fisk	261
<i>stephanophrys</i>	258	Ragged-jackets	62
<i>strigatus</i>	255	<i>Raja binoculata</i>	667 81
<i>Pristida</i>	667	<i>incornata</i>	667
<i>Pristipoma Davidsoni</i>	400	<i>laevis</i>	667
<i>Pristis pectinatus</i>	667	<i>rhina</i>	667 81
<i>Promicrops guasa</i>	412	<i>stellulata</i>	667
<i>Prosopion Couesii</i>	542	<i>Raie</i>	664
<i>Psettiichthys</i>	186	<i>Raiidae</i>	666
<i>melanostictus</i>	186, 187	Rainbow Trout	475
<i>Pseudemys concinna</i>	155	Raleigh, on the Alligator	141
<i>elegans</i>	155	pugnacity of Alligators	143
<i>hieroglyphica</i>	155	<i>Rana Catesbiana</i>	159
<i>mobiliensis</i>	155	<i>esculenta</i>	161
<i>rugosa</i>	154	Rangers	58
<i>scabra</i>	155	<i>Ranzania truncata</i>	170
<i>Troostii</i>	155	Rasher	265
<i>Pseudo-harengus</i>	580	Rat-fish of California	662
<i>Pseudojulis modestus</i>	275	Rathbun, Richard, on Crustaceans, Worms, Ra-	
<i>Pseudopleuronectes americanus</i>	182	diates, and Sponges	762
<i>Psychrolutes paradoxus</i>	259	Rat-tail Fish	244
<i>Pterophryne histrio</i>	173	Rattle-snake's Tail	701
<i>Pteroplatea maculata</i>	665	Rauning Pollack	228
<i>marmorata</i>	666	Raw Pollock	228
<i>Pteropoda</i>	702	Rawlin Pollack	228
<i>Ptychochilus Harfordii</i>	617	Ray, Bishop	665
<i>lucius</i>	617	Butterfly	667
<i>oregonensis</i>	617	Eagle	667 61
Pucker-mouth	178	Sharp-nosed	667
Puff-fish	170	Sting	667 51
Puffer	14	Razor-fish	707
Puffers	170	Razor-clam	707
Puffing-grubby	258	Razor-shell	707
Pug-nosed Shiner	322	Red Bass, name for Red-fish	372
Puit Aal	247	Red-bellied Snapper	410
Pumpkin-seed	333, 405	Terrapin	154
<i>Puncturella noachina</i>	693	Red Crab	771
Purchas on American Manatees	125, 126	Cusk family	244
Purple Shore-crab of Pacific coast	765	Dace	617
<i>Purpura</i>	698	Drum	362, 371
<i>lapillus</i>	693, 699	Red-eye	404, 405
Payseur on cause of green color of Oyster	738	Red-fender	154
<i>Pygosteus pungitius</i>	338	Red-fin	617
Quahaug	708	Red-fish	371, 372
Qualooh	476	of California	275
<i>Quassilabia lacera</i>	614	name for Blue-back Salmon	477
Queen-fish	380	Rose-fish	261
Quill-back	615	Southern	372
Quinnat Salmon	479	Red Grouper	410
development of	481, 482	Gurnard	256
distribution of	480, 481	uses of	256
names of	480	Red Horse	372, 614
river ascent of	482, 483	Red Lump-fish	264
spawning habits of	484, 485	Red-mouth Grunt	398
speed of ascent of	483, 484	Red Mullet family	361
Quinnault	480	Perch	260
Quoddy Salmon	230	name for Demoiselle	276
Rabbit Fish	170	Red Rock-Cod	265
size and habits of	170	Rock Crab	778, 779
Rabbit-mouth Sucker	614	Rock-fish	265
Racer Lunge	467	of Alaska	266
Raccoon Oysters	752	Roncador	379
<i>Racochilus toxotes</i>	277	Snapper	395
Radiates	838-843	Snappers, enemies of Turbot	172

	Page.		Page.
Red Snappers, value as a food-fish.....	396	Rip Sack.....	31
Red-spotted Trout.....	504	Risso, on distribution of Sword-fish.....	340
Red Trout.....	487	River Chub.....	617
Reef Bass, name for Red-fish.....	372	Herrings.....	579
Sponge.....	846	Perch.....	279
Trout.....	488	Rhinoptera quadriloba.....	665
Reeks, Henry, on habits of Harbor Seals.....	58	Roach, name for Fall-fish.....	617
on the Harbor Seal.....	62	Spot.....	370
Regalecus Banksii.....	449	Robin.....	393
Reina.....	266	Sea.....	255
Remora.....	446	Round.....	324
family.....	446	name for Goose Fish.....	173
brachyptera, parasite of Sword-fish.....	355	Roccus americanus.....	424, 431
squalipeta, parasite of Sword-fish.....	355	similar to Surf-fish.....	276
Remoras, fish parasite.....	355	chrysops.....	424, 428
Remoropsis brachyptera.....	446	interruptus.....	424, 431
Ropkie.....	639	labrax.....	424
Rhachianectes glaucus.....	31	lineatus.....	424, 425
Rhacochilus toxotes.....	276	Rochefort, on the habits of Antillean Manatee... products of South American Manatee.....	120 127
Rhamphocottus Richardsoni.....	259	Rock Barnacle.....	828
Rhinobatus exasperatus.....	667	Bass.....	404, 413
prodnetus.....	666, 677	Black-fish.....	410
triseriatus.....	667	Rock-cod.....	200
Rhombine.....	177	distribution of.....	262
Rhombochirus osteochir.....	446	names of.....	262
parasite of Spear-fish... ..	355	of Pacific.....	262
Rhomboplites aurorubens.....	396, 397	spawning of.....	262, 263
Rhombus maximus.....	199	Red.....	265
Rhynchobolus Americanus.....	833	Rock Crab.....	766
dibranchiatus.....	833	economic value of.....	767
Rhynchonella psittacus.....	703	development of.....	767
Rhytina.....	123	distribution and habits of.....	766
causes of extinction.....	135, 136	external characters of.....	766, 767
extinction of.....	134	of Pacific coast.....	771, 772
use to survivors of Northern Expedition.....	129	Rock-fish.....	412, 417, 421, 425
gigas.....	129	name for Pacific Rock-cod.....	262
Ribbon Seal.....	67	Black-banded.....	263
general history of.....	67	Brown.....	264
geographical distribution of.....	67	Grass.....	264
habits of.....	67	Green.....	265, 266
Richardson, on biography of the Pike.....	462	Red.....	265
Sir John, on discovery of Thymallus signifer.....	505	Yellow.....	265
on distribution of Cod.....	202	Yellow-backed.....	264
distribution of the Sea Cat-fish.....	248	Yellow-tail.....	266
the Lump-fish.....	254	Rock Lobster.....	780, 783
reproduction of the Burbot.....	238	Salmon.....	228
Right Whale Porpoise.....	16	Pensacola.....	331
Whales.....	824	Seal.....	62
distribution of affinities of.....	24	Rock Toad-fish.....	258
movements of.....	25	Rock Trout.....	267
reproduction of.....	25	Green.....	267
sizes and yield of oil of.....	26	Spotted.....	267
Ringed Perch.....	414	Rockling.....	201
Seal.....	56, 63, 65	Rocky Mountain White-fish.....	542
geographical distribution.....	65	Roe Mullet.....	451
habits, products, and hunting.....	66	Röding.....	501
history and nomenclature.....	65	Roncador.....	379
Rink, on annual catch of Harp Seals in Greenland.....	64	Black.....	379
distribution of Halibut.....	191	Little.....	379
geographical distribution of Hooded Seal.....	69	Red.....	379
Greenland Turbot.....	198	Stearnsi.....	379
Rio Grande Trout.....	476	Yellow-finned.....	379

a/

	Page.		Page.
Ronchil	361	Salmon, habits of	469, 470
Ronco	378	in Lake Ontario	473, 474
Rorquals	24	movements of	471
Rose-fish	260	name for Pike Perch	418
food of	261	Squeteague	365
range and size of	261	reproduction of	470, 471
uses of	262	spawning habits of	471, 472
Ross, J. C., on distribution of Ringed Seals	65	young fish of	472
Rosy Surf-fish	278	Black	467
Rot-gut Minnow	618	Blue-back	477
Rotchet	257	California	479
Rough dab	197	Chinook	479
Limaud	184	Dog	476
Round Robin	324	Dwarf	470
name for Goose Fish	173	Fresh-water	470
Clam	708	Grilse	472
fish	541	Hump-backed	476
Pompano	327	Kelp	413
distribution of	329	Kelts	471
Roys, Captain, on Sulphur-bottom Whale	27	Killer	458
Rudder-fish	334	King	479
family	332	Lake	487
Banded	331	Land-locked	470
Runner	332	Lost	476
Rusty Flounder	197	Parr	472
Rutty, on Sperm Whale in England	9	Pensacola, Rock	331
Ryder, John A., on the Life-history of the Oyster	711-758	Quoddy	230
Sabre-fish	335	Rock	228
Sac-à-lait, name for Crappie	407	Sea	230
Mummichog	466	Silver	477
Sacramento Perch	405	tribe	468
Pike	616-617	Trout	474, 485
Saddle-backs	62	name for Dolly Varden Trout	504
Saddlers	62	White	331, 477
Sah-Kwey	479	Salmonidae, families related to	547, 548
Saibling	500	Salpa	259
and Quassa, resemblance between	503	Salt Pickerel	418
Sail-fish	356	Salt-water Bream	393
movements of	357	Chub	269
name for Carp Sucker	615	Terrapins	152
Bone-Shark	667	Trout, name for Squeteague	362
Sword-fish	—	Salve Bug	827
Sailor's choice	393	Salvelinus fontinalis	465, 466, 497, 498
name for Pig-fish	398	malma	504
Saith	231	namaycush	485
Saithe	226	namaycush, enemy of Alewives	592
Salmarino	501	namaycush var. siscowet	496
Salmo chouicha	480	siscowet	486
Clarkii	568	Sand Bug	779
confinis	487	Crab	774
fontinalis	498	cusk family	243
Gairdneri	468, 474	dab	197
irideus	468, 475	dollar	830, 840
purpuratus	475	Eel	244
quinnat	480	fleas	824
salar	468, 237	Mullet	449
siscowet	496	Pike	424
stomias	475	Piper	676
spilargus	468, 476	Shark	709, 671
symmetrica	487	Smelts	456, 457
toms	487	Smelts, spawning, of	456, 457
Salmon	468	Sanguisuga, parasite of Sword-fish	354
abundance of	469	Sarda chilensis	319
distribution of	468, 469	Mediterranea	316

	Page.		Page
<i>Sarda pelamys</i> , similar to Frigate Mackerel.....	306	<i>Scaphirhynchus platyrhynchus</i>	662
Sardine, name for Anchovy.....	611	Schellfisch.....	224
Gulf Menhaden.....	576	Scherer, on extinction of <i>Rhytina</i>	135
California.....	569	<i>Schizotharus nuttalli</i>	706
Sargo.....	400	Schlegel, on distribution of the Cat-fish.....	248
Sarpo.....	251	on spawning of the Cat-fish.....	249
Sars, G. O., on Codfish schools.....	205	Schoodic Trout.....	470
development and spawning habits		School Bass, name for Red Fish.....	372
of European Lobster.....	802, 803	Cod.....	201
habits of the Pollock.....	229	Lobster.....	783
natural history of Norwegian Lob-		Schroder, on parmacitty.....	11
ster.....	810, 811	<i>Sciæna aquila</i>	368
process of shedding of European		occliata.....	362, 371
Lobster.....	793	<i>Sciænidæ</i>	362
reproduction of Codfish.....	214, 215	<i>Scomber Colias</i>	303
Sauer on extinction of <i>Rhytina</i>	135	diego.....	303
Sauger.....	424	gladius.....	356
Saury.....	460	grex.....	303
Savanilla.....	611	pneumatophorus.....	303
Savega.....	569	scombrus.....	281
Saw-belly.....	582	<i>Scomberesocidæ</i>	459
Saw-fish.....	667	<i>Scomberesox saurus</i>	460
Sawyer.....	654	<i>Scomberomorus</i>	307
<i>Saxidomus aratus</i>	708	caballa.....	307, 316
<i>gracilis</i>	708	concolor.....	316
Say, on food and habits of Blue Crab.....	776	maculatus.....	307
Sayrus Camperif.....	461	regalis.....	307, 316
Scabbard-fish.....	335	<i>Scombroleucius brevirostris</i>	460
Scads.....	326	Scodled Skuljoe.....	238
<i>Scalaria Groenlandica</i>	693	<i>Scopelidæ</i>	547
<i>Novangliæ</i>	693	<i>Scopelus</i> family.....	547
Scale Carp.....	619	Scores by on habits of Nurse Shark.....	674
Scallop.....	709	Seal killing.....	64
Scammon, C. M., on abundance California Gray		<i>Scorpæna dactyloptera</i>	260
Whale.....	31, 32	guttata.....	263
antics of Humpback Whale.....	26, 27	marinus.....	261
Blackfish.....	12	norwegicus.....	261
Bowheads.....	21	porous.....	263
California Sea Lions.....	45-48	regulus.....	261
Porpoise.....	14	scrofa.....	263
destructiveness of Killer		Stearnsi.....	260
Whales.....	17	viviparus.....	261
distribution California Sea		<i>Scorpenichthys marmoratus</i>	259
Elephant.....	72	<i>Scorpene</i>	263
Right Whales.....	25	<i>Scorpina</i>	263
Sulphur - bot-		<i>Scorpion</i>	259, 263
tom Whales.....	27	<i>Scorpiæ californiensis</i>	395
figures of Fur Seals.....	54	Scotch Dutch Herring.....	551
habits of California Grampus	14	Scott, G. C., on abundance of the Bonito.....	318
California Sea Ele-		Spanish Mackerel..	308
phant.....	73	the best fishing ground for Sheeps-	
the Leopard Seal.....	59, 60	heads.....	393
motion of Cachalot.....	10	the Grouper, as a dinner-fish.....	411
movements of Right Whales	25	habits of the Bonito.....	318
Northern Fur Seals.....	49-53	reproduction of Spanish Mackerel	313
Pacific Finback.....	30	<i>Scrag Whale</i>	30
reproduction of Right		Whale, history of.....	30
Whales.....	26	<i>Scrod</i>	201
the Scrag Right Whale.....	31	<i>Scrode</i>	201
size of California Sea Ele-		<i>Sculpin</i>	258
phant.....	72	Daddy.....	258
Humpback Whale..	26	Pigmy.....	258
Sperm Whale.....	9	tribe.....	258
Scamp.....	413	<i>Sculpins of Atlantic coast</i>	258

	Page.		Page.
Sculpins, food of Goose Fish	173	Sea Salmon	230
of Pacific coast	259	Sea-serpent	449
Sculp	386	Sea-snails	253, 693
abundance of	389	Sea-snakes	628
enemies of	391	Sea-snipe, name for Silver Gar-fish	488
food of	388	Sword-fish	338
increasing abundance of	392	Sea-star	840
movements of	390	Sea-toad	258
spawning of	389	Sea Trout	267
value of	392	Sea Trout, name for Squeteague	362
Scuppang	386	White Sea Bass	378
Scylliorhinus ventriosus	676	Sea Urchin	833, 839
Scytalina cerdale	243	Seal, Bay	62-65
Sea-arrow	690	Bearded	63
Sea Bass	407	Common	55
breeding of	409	Crested	62, 63, 68
geographical range of	408	Fjord	62
movements and habits of	409	Fresh-water	59
name for Red-fish	372	Fur	37, 75-113
size and value of	409, 410	Northern Fur	49, 54
White	378	Hair	37
Sea-bat	173	Harbor	55
Sea-boat	701	Harp	62, 65
Sea-Bear	49	Hooded	65, 68
Sea-bug	701	Leopard	59, 73
Sea Cat	627	Native	53, 65
name for Northern Fur Seals	51	Ribbon	67
Sea Cat-fishes	248	Ringed	56, 63, 65
Sea-caterpillar	701	Rock	62
Sea-Clam	708	Square Flipper	65
Sea-Cow	114-116	tribe, in general	32, 33
Arctic	128	West Indian	67
Sea Crab	775	Sebago Trout	470
Sea-craws	783	Sebastes marinus	260
Sea Cucumbers	838	Sebastiechthys atrovirens	265
Sea Devil	173	auriculatus	264
Sea-dog	55	carnatus	264
Sea-ears	700	caurinus vexillaris	264
Sea Eel	655	chlorostictus	264
Sea Elephant	49	chrysomelas	264
California	72	ciliatus	266
Sea-fans	841	constellatus	265
Sea-feathers	841	elongatus	266
Sea Ginger	841	entomelas	266
Sea-hare	18	flavidus	264, 266
Sea-Horse family	172	maliger	264
geographical distribution	172	melanops	266
strange shapes—interesting habits	172	miniatus	265
Sea Lawyer	397	mystinus	263, 266
Sea Lion	37, 38	nebulosus	263
general history of	39	nigrocinctus	263
geographical distribution	38, 39	ovalis	266
California	44	pinniger	264, 265
Sea Mantis	893	proriger	266
Sea Mullet	453	rastrelliger	264, 265, 266
Sea-needle	458	rhodochloris	264-265
Sea-owl	254	rosaceus	264, 265
Sea-perch	273	ruber	265
Sea-pike	458	rubrivinctus	265
Sea-ravens, food of Goose Fish	173	serrioeps	263
name for Sculpin	258	umbrosus	265
Sea-robin	251	Sebastes paucispinis	266
distribution of	256	Sea-catch	77, 81
spawning of	256	Sea-vitchie	40

Shark, Basking ... 676
 — Oil ... 676
 — Dog ... 676
 — White ... 676

INDEX.

	Page		Page
Sei	228	Shark, Cat	678
Selene argentea	323	Dog-fish	678
setipinnis	322	Dusky	677
Semele decisa	708	Fox	677
Semotilus bullaris	617	Ground	676
corporalis	617	Gurry	677
Sennet	448	Hammer-head	676
Señorita-fish of California	275	Mackerel	672
Seomga	474	Man-eater	672, 676
Sergeant-fish	444	Nurse	677
Sergeant Major	276	Sand	678
Seriola carolinensis	331	Shovel-nosed	675, 676
dorsalis	331	Thrasher	677
falcata	331	Tiger	672
fasciata	331	Sharks,	667-674
Lalandii	331	of Pacific coast	674-676
zonata	331	Sharp-headed Finner	30
Seriphus politus	380	Sharp-nosed Ray	665
Serranoid fishes	413	Shedders	776
Serranus atrarius	407	Sheepshead	386
ciathratus	413	distribution of	386
fasciolaris	410	family	386
maculofasciatus	414	name for Butter-fish	333
nebulifer	413	Parrot-fish	275
trifurcus	410	Porgy	394
Sesarma reticulata	763	Three-tailed	445
Sethe	228	Sheepswool Sponge	848
Sey	228	Shiner	617, 618
Sey Pollack	228	name for Menhaden	569
Shad	594	Surf-fish	278
causes influencing rate of movement up		Blunt-nosed	322
rivers	605	Golden	616
effects of water temperatures on migrations	598-599	Pug-nosed	322
food of	606-607	Shiners	616
geographical distribution of	594-596	Ship-worm	704
hereditary instinct of locality in	597, 598	Shoal-water Cod	201
migrations of	596-597-598	Trout	488
name for Gulf Menhaden	576	Shoemaker	332
Moharra	279	Shoemaker-fish	326
names of	594	Shore Cod	201
observations of, on Saint John's River, Fla.	599	Shore-crab, Purple, of Pacific coast	765
period of river life of	603-606	Yellow, of Pacific coast	765
reproduction of	605-606	Shore Pompano, distribution of	329
size of	606	Short-nosed Gar-pike	663
young, observations of movements in Po-		Shovel-nosed Shark	676, 677
tomac	603	Sturgeon	662
Gizzard	610	Shrimp, California	818
Hard-head, name for Menhaden	569	Common	816-818
Hickory	607	Mantis	823
Long-boned, name for Moharra	279	Shrimps and Prawns	816-823
Mud	610	Southern	821-823
School	201	Shrimps, River	819
Stink	610	Shriver, W. W., letter from, claiming first trans-	
Tailor	608	portation of Black Bass	404
Trout, name for Squeteague	362	Sibbald, on Sperm Whale in England	9
Waiter	541	Sibbaldina borealis	27
White-eyed	610	anifurens	27
Winter	610	lectirostris	28
Yellow-tail, name for Menhaden	569	tuberosus	28, 29
Shark, Basking	667	Sidera mordax	626
Black-finned	677	ocellata	626
Blue	672, 673, 676	Sifo	337
Bone	667	Silleoidea	844
Bonnet-headed	677	Siliqua patula	707

Shark, Bay ... 676

	Page.		Page.
Sill	550	Smelt, name for Pacific Tom Cod	223
Silkung, similar to Deal-fish	449	Alaska	544
Sillock	228	California	457, 544
Siluridae	696	Little	457
Silver Bass, name for Moon-eye	612	Green	456
Eel	335	Little	457
Silver-fish	611	Surf	544
Silver Gar-fishes	458	Smelts, Sand	456
Hake	240	Smith, on different varieties of Mackerel	308
distribution of	240	John on size of Mackerel (1622)	299
habits of	242	Capt. J. B., on spawning of Sand Smelts ..	457
migrations and movements of	241	J. V. C., on abundance of Chub Mackerel ..	304
uses of	242	Turbot in America	176
Lunge	487	S. I., on development of the Shrimp	817
Moon-fishes	322	young Lobster	799, 802
Mullet	449	distribution and coloration of com-	
Porch	375	mon Shrimp	816
Salmon	477	growth and development of Rock	
Sides	456	Cod	767-769
Silver-spotted Tunny	320	habits and distribution of Jonah	
Silver Squeteague	367	Crab	769, 770
Surf-fish	278	Smolt	468
Trout	475	Smooth Black-fish	269
Simmonds, on gastronomic value of the Cuttlefish.	692	Dog-fish	674
Simpson, A. W., on geographical distribution of		Flounder	183
Mackerel	281	Smyth & Lowe, on size of South American Mana-	
Singing-fish	253	tee	117
Sirenia	33	Snail-borers	696
Sirenians	114	Snails	696
food of	118	Sea	253
Siscowet	485, 486	Snake-fish family	548
Siskawitz	486, 496	Snapper family	395
Skarp Herring	550	name for Rose-fish	260
Skate, Barn-door	668	Alligator	153
Skates	668	Bastard	397
Skeponopodus guebucu	357	Black	397
typus	357	Brown, name for Red Grouper	410
Skip Mackerel, name for Bluefish	433	Gray	397
Skipjack	460	Mangrove	396, 397
name for Bluefish	433	Pensacola	396
Butter-fish	333	Red-bellied, name for Red Grouper	410
Cutlass-fish	335	Snappers, food of Mackerel	291
Inland Alewife	594	name for Bluefish	433
the Jurel	324	Black, name for Cod-fish	201
Leather-jacket	332	Blue, name for Bluefish	433
Pacific Bonito	319	Snapping Mackerel, name for Bluefish	433
Runner	332	Turtles	152, 153
Skipper	460	breeding seasons and habits of	153
Skopster	460	economic value of	153, 154
Skowitz	477	size of	153
Skrae-fish	228	North American species	153
Skulljoe	228	Snooks	444
Skunk porpoise	16	Snuffing pig	14
Sleeper Shark	674	Snuffer	14
Slider	155	Social Whale	11
Slime Eel	680	Soft Clam	707
Slimskin	73	Crab	776
Slippery Dick	274	Soft-shelled Tortoises, range of	152
Sole	188	Soft-shell Lobster	783
Small Herring	550	Turtles, economic value of	152
Small-mouth Black Bass	401	food of	152
Smelt	543	Soglia	187
family	543	Soldier Crabs	779
name for Lant	244	Sole	182, 186, 187

3/

	Page.		Page.
Sole, American	175	Spicer, Capt. William, on pugnacity of Spear-	
Californian	185	Ashes	358, 359
Long-finned	188	Spider Crabs	778
Slippery	188	Spiering	543
Solea vulgaris	175	Spikes	298
Soleidae	175	Spiny Lobster	780, 781
Solenococcha	703	Spiralis Gouldii, food of Mackerel	290
Somniosus microcephalus	676, 675	Spisula ovalis	703
Sookii	703	solidissima	708
Southern Red-fish	372	Split-mouth Sucker	614
Spade-fish	445	Split-tail	817
Spanish Flag	265	(American, commercial)	846
Leech	837	Sponge, Bath	845
Mackerel	303	Boring	850
and its allies	307-316	general considerations of	843
reproduction of	313	Gherbie	848
Sparad	278	Glove	845, 847
Sparada	276, 278	Grass	848, 849
Sparidae	330	Hard Head	845
Sparling	543	Horse	845, 848
Sparoids	394	injurious	850
Californian	394	Reef	846
Sparus, auratus	393	Sheepswool	848
pagrus	393	Velvet	848
Spawn Pike	421	Venetian Bath	848
Spear-fish	336, 337, 357	Wool	845
movements of	358	Yellow	845, 849
name for Carp Sucker	615	Zimocca	845
pugnacity of	358	Sponges	843-846
Mediterranean	337	Spongia, the genus	846
Spearing	612	agaricina	845
Spearling	543	agaricina, sub-sps. Corlosia and dura	849
Speckled Garrupa	263	equina	845
Hond-fish	308, 435	equina, sub-sp. cerebriformis	849
Moray	628	equina, sub-sp. gossypina	848
Trout	497, 475, 504	equina, sub-sp. meandriniformis	848, 849
culture of	500	graminea	848
distribution of	498	officinalis	845
habits of	498, 499	officinalis, sub-sp. tubulifera	847
size and food of	500	Spot	378
spawning season and habits of	499	Spotted Bass, name for Red-fish	372
Turtle	158	Black Rock-fish	206
Sperling	550	Cabrilla	414
Sperm Whale	7-11	Cat-fish	249
in California	9	Cero	307, 316
distribution of	7	Corsair	265
in Europe	9	Hind	412
food of	10	Rock Trout	267
former abundance of	8	Sand Flounder	199
habits of association, motion, blowing, &c	9	Squeteague	365
reproduction of	10	Tortoise	158
size and color of	9	Trout	475
useful products of	11	Trout, name for Squeteague	365
Porpoise	18	Turbot	177
capture of two, in England	18	Sprat	277
Sphyrana argentea	448	Herring	579
borealis	448	Spring Herring	579
picuda	448	Squali	616
spet	448	Squalius gibbosus	616
Sphyrænidæ	448	niger	616
Sphyrna tiburo	671	obesus	616
zygæna	671, 672	pandora	616
Spiced Herring	550	purpureus	616
		rhomaleus	616

Spiny Lobster

Spisula falcata 708

8/

	Page.		Page.
<i>Squalus acanthias</i>	672, 674, 676	Stearns, Silas, on feeding habits of Margate fish...	394
<i>americanus</i>	204	Silver Gar-fish.....	458, 459
Square Flipper Seal.....	65	Spade-fish.....	445, 446
Squat.....	674	Spotted Hind.....	412
Squatina.....	171	Spotted Squeteague.....	366, 367
<i>angelus</i>	674	Sting Ray.....	664
Squeteague.....	362	history and habits of Southern	
abundance of.....	362-364	Red-fish.....	371, 373
great catch of, off Rockaway, 1881....	363	the King-fish.....	316
names of.....	362	Mangrove Snapper.....	397
Silver.....	367	manner of capture and value of	
Spotted.....	365	the Drum.....	369
Squid School.....	201	migrations of Spanish Mackerel	
Common.....	687	in Gulf of Mexico.....	311, 312
Squid-fish.....	11	movements of Red-fish.....	373
Squid-hound.....	425	Mullet in the Gulf of Mexico.....	454-456
Squids, enemies of the Lant.....	345	names of Banded Groupers.....	413
Squilla dubia.....	823	Plaice.....	178
<i>empusa</i>	823	Red-mouth Grunt.....	398
Squirrel-fish.....	410	reproduction of Spanish Mackerel.....	315
name for Sailor's Choice.....	393	size and habits of the Pig-fish.....	399, 400
Bermuda.....	361	spawning of Red Snappers.....	396
Squirrel Hake.....	234	season of Sea Bass.....	409
Squit.....	362	of Sheepshead.....	385, 386
Squitee.....	362	Toad-fish.....	252
Stag-horn Corals.....	841	Sucking-fish.....	446
Stannard, R. H., on destructiveness of the Jelly-fish.....	842	Sarpum.....	611
Star Corals.....	841	Shread-fish.....	279
Star-fish, name for Butter-fish.....	833	Whipparee.....	665
Star-fishes.....	840, 841	Stedman on size of South American Manatee.....	117
Starbuck, Alexander, on former abundance of Sperm Whale.....	8	Steel-head.....	474
Starling.....	267	Steen-Kobbe.....	62
Starry Flounder.....	184	Steindachner on size of Sword-fish in the Mediterranean.....	347
Stay-ships, fish-parasites.....	355	Steinbutt.....	199
Stearns, Silas, on abundance and habits of Common Pompano.....	328, 329	Steller, G. W., on habits of Northern Fur Seal.....	51, 52
on abundance and habits of the Grouper.....	410, 411	Rhytina.....	130
on abundance and habits of the Sailor's Choice.....	394	misfortunes of.....	130
on abundance of Sheepshead.....	380	on natural history of Sea Ccw.....	130-134
and size of the Plaice of Striped Bass in Gulf of Mexico.....	425	Stenlock.....	228
Alligator Gar.....	664	Stenotomus caprinus.....	383
Angel-fish.....	280	chrysope.....	388
Black Grouper.....	411	Gardeni.....	386
Bluefish in Gulf of Mexico.....	442-443	Stereolepis gigas.....	413
the Crevallé.....	324	Stickleback family.....	457, 458
destructiveness of the Drum.....	368	four-spined.....	457
distribution of Banner Pompano.....	329	ten-spined.....	457
the Cobia.....	444	two-spined.....	457
Florida Manatees.....	114	Stimpson on the Kelp Crab.....	778
and habits of Red Snappers.....	395	range of Southern Shrimps.....	822
of Plaice.....	179	Sting Ray.....	664
feeding habits of Toad-fish.....	252	Stingaree.....	664
Gray Snapper.....	397	Stink-pot.....	154
Gulf Menhaden.....	575, 577	Stink Shad.....	610
habits of Amber-fish.....	331	Stint.....	543
Blue Crab.....	777, 778	Stizostedium canadense.....	417, 424
the Jurel.....	325	vitreum.....	417
		Stoasonon narineri.....	665
		Stockfish.....	200
		Stokvisch.....	242
		Stolephorus Browni.....	611
		<i>compressus</i>	612

	Page.		Page.
Stolephorus delicatissimus	612	Sturgeon, Green	661
Mitchilli	611	Lake	661
ringens	612	Shovel-nosed	661
Stone Cat	627	White	661
Stone Crab	772, 774	Sturgeons, Atlantic coast	659-662
distribution of	773	California	662
Stone-biter	249	Succoteague	362
Stone, Livingston, on the California Salmon	479-485	Sucker, Brook	614
Stone-roller Sucker	615	Carp	615
Storer, H. R., on abundance of the Bonito	317	Chub	614
Chub Mackerel	304	Gourd-seed	615
Cunners	274	Hammer-head	615
Squeteague	362	May	614
amount of oil obtained from		Missouri	615
Mackerel Shark	669	Mud	615
distribution of Halibut	192	name for the Bagre	379
the Scrppaug	387	Rabbit-mouth	614
Tautog	269	Stone-roller	615
economic value of Cat-fish	250	Sweet	614
Snapping Tur-		Sword-fish, name for Remora	446
tle	154	White	614
Toad-fish	253	Suckerel	615
Flat-fish	182, 183	Suckers	614
gastronomic value of the Tau-		name for Remora	446
tog	271	Sucking-fishes	446
the habits of the Lant	245	Sudis ringens	548
movements of Haddock	224	Suk-kegh	477
Mutton-fish	247	Sulphur-bottom Whales	27, 29
names of Sea Bass	407, 408	distribution and move-	
spawning of Mackerel	296	ments of	27
Toad-fish	252	Summer Flounder	178
uses of the Silver Hake	242, 243	Herring	579
Strawberry Bass	406	Sun-fish	405
Striped Bass	424, 425	name for Blunt-nosed Shiner	322
abundance of	427, 428	name for Bone Shark	667
American and European, similarity		Blue	406
of	424	Common	405
family	424	Long-eared	406
fishing clubs	426, 427	Sun-fishes, name for Jelly-fish	841
food of	425, 426	Ocean	169, 170
geographical distribution of	425	Sun-squalls	169
habits of	425	Sun Trout, name for Squeteague	362
manner of capture, size and ship-		Sundevall, Carl J., on reproduction of European	
ment of	426	Burbot	238, 239
reproduction and growth of	426	Sunny	405
uses of	426	Surf Clam	708
Bonito	318, 319	Surf-fish	277
Drum	367	family	276
Fish	366	habits of	276, 277
Lake Bass	424	names of	276
Mullet	449	Black	279
Perch	417	Blue	277
Stromateidae	332	Rosy	278
Stromateoid fishes	332	Silver	278
Stromatens alepidotus	333	Wall-eye	278
simillimus	334	Surf Smelt	544
triacanthus	333	Whiting	377
food of Sword-fish	349	Surgeon-fish family	279
Strombas gigas	699	Sutherland, P. C., on abundance of Halibut	192
Strömming	550	Svine-hval	11
Strongylocentrotus dröbachiensis	838, 839	Swedish Leech	837
franciscanus	838, 839	Sweet Sucker	614
lividus	839	Swell fishes	170
Sturgeon	660-669	Toad	170

	Page.		Page.
Sweeny, E. O., on dissimilarity of Siscowet and Namscoch	497, 498	Tautog fishery	271, 272
Swine-fish	249	food of	270
Swingle Tail	671	habits of	270
Sword-fish	336-338	reproduction of	270, 271
abundance in the past, probability of		Tautogaonitis	268
future decrease	342	Tchawytcha	479
abundance of at present	348	Telleus	708
absence of ordinary habits of breeding		Tender Herring	551
season among	350	Terebratulina septentrionalis	703
in America, allusions by early writers	339, 340	Teredo, destructiveness of	706
as an article of food	353, 356	dilatata	704
distribution on coast of United States	340	megotara	704
distribution in Eastern Atlantic	340	navalis	704
effects of overfishing for in the Medi-		norvegica	704
terranean	348	Thompsoni	704
enemies of	354	Terrapin, Diamond-back	155-157
entering rivers	343	Pine-barren	158
family	336	Red-bellied	154
geographical distribution and move-		Salt-water	156
ments of	338	Yellow-bellied	155
influence of temperatures on move-		Terrapins, Fresh-water	154
ments of	344, 345	Tetrapturus albidus	337, 358
invertebrate parasites of	354	albidus, enemy of Swordfish	354
large painting of, in Bremen	342	belone	337
movements of individuals	345	imperator	357
name for Cutlass-fish	335	indicus	336, 358
name for Gar-pike	662	Tetrodon turgidus	170
names of	337	Tetrodontida	170
nature of food of	349	Tetu, D. H., on uses of White Whale	19
occurrence in Pacific and Indian		Thalassochelys caretta	147
Oceans	341	Kempii	147
Parasites, Suckers, or Bemoras	355	Thalassophryne maculosa, closely related to Toad-	
periodical movements of	342, 343, 344	fish	251
probable winter habitat of	345	Thaleichthys pacificus	547
pugnacity of	351, 352, 353, 354	Thimble-eye Mackerel	303
rate of growth of	347	Thompson, on capture of Harbor Seal	57
reasons of coming of, on our coast	344	Sperm Whale in England	9
reproduction of	349, 350	J. H., on periodical movements of	
size of, in the Mediterranean	347	Sword-fish	343
times of arrival and departure of	343, 344	Thrasher Shark	671
American, maximum, and average		Thread-fish	320
size of	346	family	279
American, minimum size of	346-347	Thread Herring	610
Sucker	446	Thresher Shark	671
Sycotyphus canaliculata	694	Three-tail Porgy	445
Syngnathide	172	Sheepshead	445
Synodontide	548	Thunder-pumper	370
Synodus fustens	548	Thutinameg	173
Incioceps	548	Thymallus montanus	505
Syrenki, discovery of male eel by	638-640	signifer	505
on the ovaries of the eel	641-644	tricolor	505
Tailor shad	608	vulgaris	506
Talorchestia longicornis	825	Thysanopoda, food of Mackerel	290
megalophthalma	825	Tibrie	228
Tambor	265	Tiger Shark	671
Tarpon	611	Tile-fish	360
Tarpum	610	family	360
Tartaruga	150	Tima formosa	841
Tauna	322	Timberello	305
Tautaug	268	Tinker Mackerel	290, 304
Tautog	268, 269	Tinkers	298
abundance of	271	Tiny Herring	579
distribution of	269	Toad-fish	251
		food of	252

Tailor, freshwater .. 608
 Tailor, saltwater .. 608

	Page.		Page.
Toad-fish, name for Goose Fish	173	Tritia	696
name for Swell Fish	170	trivittata	693
Tobias-fish	244	Trophon clathratus	693
Togue	486	scalariformis	693
Tom-cod, name for King-fish	375	Trout	486
name for Rock-fish	267	in the Great Lakes	493-496
Atlantic	223	Bastard, name for Silver Squeteague	367
Ton	226	Bear	497
Tonicella marmora	693	Black Spotted	475
Tonnina	322	Brook	475
Toothed Herring	612	Bull	504
Torgoch	501	Deep-water	488
Torpedo	666	name for Squeteague	364
californica	667	Dolly Varden	504
occidentalis	666	Gray	487
Torsk	200	Grey, name for Squeteague	362
Tortoise, Bell's	157	Golden	475
Chicken	157	Lake	485
Gopher	158	name for Dolly Varden Trout	504
Musk	152, 154	Mackinaw	488
shell Turtles	140	Mountain	475
Spotted	158	name for Black Bass	401
Wood	158	Pot-bellie	488
Tortoises, Geographic	152	Rainbow	475
Pond	152, 154, 157	Red	487
Soft-shelled, food of	152	spotted	504
and Turtles, Marine	147	Reef	488
mode of life of	147	Rio Grande	476
distribution of	147	Rock	267
Tortue franche	150	Salmon	474, 485
Trachurus picturatus	326	name for Dolly Varden Trout	504
saurus	326	Salt-water, name for Squeteague	362
Trachydermon albus	693	Sea, name for Green Rock Trout	267
ruber	693	Sea Bass	378
Trachynotus carolinus	326	name for Squeteague	362
fasciatus	326	Sebago	470
glaucus	327, 329	Schoodic	470
goreensis	327, 329	Shad, name for Squeteague	362
ovatus	327, 329	Shoal-water	488
Trachypteridae	449	Speckled	497
Trachypterus altivelis	449	name for Dolly Varden Trout	504
Tree-fish	263	Rainbow Trout	475
Trepang	636	Spotted, name for Rainbow Trout	475
Triakis Reulei	676	name for Squeteague	365
semifasciatus	676	Sun, name for Squeteague	362
Trichechus latirostris	114, 118	White, name for Silver Squeteague	367
manatus	114, 115	True, F. W., on enumeration of eggs in Mackerel	297
senegalensis	119	the Sirenians	114-136
Trichiurus haumela	335	useful Aquatic Reptiles and Batrachians	141-161
lepturus	335, 337	Trumbull, J. H., on abundance of the Bonito	317
Trichodon Stelleri	253	letter in the Dubertus	29, 30
Trichotropis borealis	693	Trumpon	9
Triforis nigrocinctus	693	Trunk Fishes	170
Trigger-fish	172	Turtle	147
Trigla	256	Trygon dipterurus	666
cauculus	256, 257	Tsebarqua	267
gunardus	256	Tub-fish	256, 257
hirando	256, 257	Tuladi	486
lyra	257	Tuna	319, 320
Triglidae	255	Tunny	320
Triglopa Thompsoni, food of Burbot	239	Long-finned	320
Trionychidae	152	Silver-spotted	320
Triple-tail	444	Turbot	177
Black	445		

Trygon centrura 665

	Page.		Page.
Turbot in America.....	175	Verrill on the Amphipods.....	824, 825
name for Diamond Flounder.....	185	appearance and habits of Lady Crab.....	774, 775
File fishes.....	172	of Mantes Shrimp.....	823
Plaice.....	178	breeding habits of King Crab.....	829
skin used for cleansing purposes.....	172	color of <i>Pandalus borealis</i>	819, 820
valuable as food.....	172	destructiveness and distribution of the	
Flounder.....	178	Teredo.....	706, 707
Greenland.....	199	distribution of the Green Crab.....	774
Spotted.....	177	Rock Crab.....	766
Turning Harps.....	62	habitat of common Prawn.....	819
Turritella erosa.....	653	habitats of the common Barnacle.....	828, 829
Tusk.....	233	habits and appearance of Oyster Crab.....	765
Tusk-shells.....	703	characteristics of Fiddler	
Tursiops erebennus.....	16	Crabs.....	763-765
gillii.....	16	of common Shrimp.....	816, 817
Turtle, Alligator.....	153	and destructiveness of Boring	
Bastard.....	147	Limporia.....	826, 827
Leather.....	147	of Hermit Crabs.....	720
Loggerhead.....	147, 153	Marine Worms.....	831-833
Speckled.....	158	the Sea-arrow.....	690-692
Trunk.....	147	Spider Crab.....	778
Turtles.....	147	and uses of Blue Crab.....	776
Box.....	158	history and breeding habits of the com-	
Green.....	147, 150	mon Squid.....	687-690
Hawk's bill.....	147, 149	of the Ship-worm.....	704, 705
Snapping.....	152, 153	the Jelly-fishes.....	841, 842
Tortoise-shell.....	149	Mud Crabs.....	772
Tyee.....	479	Ophidium marginatum.....	243
Tyler, E., on abundance of Branch Alewife.....	591	reproduction of the Couch.....	694, 696
movements of Branch Alewife.....	591, 592	the Sand-dollar.....	839, 840
Tylosurus caribbaeus.....	459	Squids, enemies of Mackerel.....	299, 300
exilis.....	459	structure of American Leech.....	834
hians.....	459	Vuva.....	266
Jonesii.....	459	Voilier.....	338
longirostris.....	458	Volator.....	456
vulgaris.....	459	Von Frantzius, on abundance of South American	
Tyrant of the Lake.....	487	Manatee.....	123
Tyrgon centrura.....	664	distribution of Florida Manatees.....	115
Uhler and Lugger on economical importance of		Von Heuglin, on distribution of Hooded Seal.....	70
the Drum.....	368	Ringed Seals.....	65
distribution of Sword-fish.....	341	Von Schrenck, on distribution of Ribbon Seal.....	67
Umber.....	506	Von Stemann, on movements of young Eels.....	651
Umbrina roncador.....	379	Vorticella.....	733
Unceola irrorata, found in stomach of Sea-robin.....	256	Wagner, on distribution of Ringed Seals.....	65
Unio.....	703	Sea-bears.....	52
Unionidae.....	709, 710	Waite, Shad.....	541
Upeneus flavovittatus.....	361	Walker, S. T., on consumption of Moss by Sheeps-	
Uranidea.....	259	head.....	385
aspera.....	259	Wall-eye Surf-fish.....	278
guloaa.....	259	Wall-eyed Herring.....	560
Urohin, Sea.....	838	Pike, abundance of.....	418
Urolophus halleri.....	666	in the Great Lakes.....	418-423
Urosalpinx cinerea.....	397	name for Pike Perch.....	417
Ursus marinus.....	51	Walrus, Atlantic, distribution of.....	34
Vache marin.....	116	Walruses.....	33, 34, 35
Vaginicola.....	733	Atlantic and Pacific species.....	34
Valenciennes, on distribution of Sword-fish.....	340	Walton, on the habits of Salmon.....	469, 470
Velutina laevigata.....	693	marked Salmon.....	470
zonata.....	693	Warmouth.....	405
Velvet Sponge.....	848	Black.....	405
Venericardia borealis.....	703	Warsaw.....	411
Venetian Bath Sponge.....	848	Water Flounder.....	199
Venus mercenaria.....	703	Weak-fish.....	562
Vermilion-fish.....	264	Webb, Capt. Henry, on spawning of Mackerel.....	295

	Page.		Page.
Weesiok	608	White Mullet	449
Wells, on pugnacity of Alligators	144	Perch	431
Welshman	401	Perch, name for Drum	370
West Indian Seal	67	Surf-fish	277
geographical distribution of	67	similar to Striped Bass	424
Whale, Black	11, 25	Surf-fish	276
Blowing	11	Salmon	477
Bowhead	20	name for California Yellow-tail	331
Bunch	26	Sea Bass	378
Caing	11	Sturgeon	662
Finback	28, 30	Sucker	614
Grayback	31	Trout, name of Silver Squeteague	367
Gray, California	31, 32	Whale	15, 18
Greenland	20	captures in Massachusetts	18, 19
Humpback	26, 27, 29	distribution of	18
Jupiter	30	habits of	18
Killer	12, 17	historical note of	18
Northwest	24	uses of	19
Pilot	11	Whiting, name for Harvest-fish	333
Polar	20	King-fish	375
Right	6, 24	Musquaw River White-fish	541
Scrag	30	Tom Cod	223
Social	11	Bull-head	277
Sperm	7-11	Deep-water	377
Whales, Sulphur-bottom	27, 29	New England	240
White	15, 18	Surf	377
Whipparee	665	Whitings	376
White, on range and habits of Mantis Shrimps	623	Wide Gap	173
uses and destructiveness of the Green		Gut	173
Crab	774	Will George	269
Angel-fish	230	Williams, H. S., on the habits of the Cavally	323
Bass	424, 428	Mullet season in the In-	
White-boned Porgy	394	dian River	453, 454
White-coats	62	Red-fish as a game-fish	374, 375
White-eyed Shad	610	season for Sheepshead	365
White-fish	507	Wind fish	173
abundance of	536-540	Window-pane, name for Spotted Sand Flounder	199
artificial propagation of	523-535	Turbot	177
capture of	535, 536	Wing-fish	255
development of eggs and embryo	519-521	Wing-shells	702, 703
diseases of	535	Winkle	604
embryonic, food of	515, 516	Winnifish	470
enemies of	512, 513	Winter Flounder	179, 182
experiments in hatching eggs of	528	Shad	610
food of	513-516	Wittmack, Dr. L., on habits of the Pike in Europe	462, 463
habits of, at spawning season	516-519	on the habits of the Sabling	503, 504
methods of shipping eggs of	528, 529	Dr., on movements of Haddock	225
migrations of	509	on reproduction of Haddock	226
name for Bluefish	433	Wolf-eel	260
Menhaden	569	Wolf-fishes	247-249
Silver Salmon	477	Wood, on capture of American Manatee	125
Tile-fish	361	Wood-louse	701
names of	507	Wood Tortoise	158
rate of growth of	521, 522	Woodward, on the Pholades	707
size of	507, 508	Woohee	387
spawning of	516	Wool Sponge	545
Chief Mountain	542	Warm Cod	301
Lake	507	Worms	631-637
Menomonee	541, 542	bait	631
Mongrel	541	marine	631
Musquaw River	541	Wrasses	247
Rocky Mountain	542	Wrinkle	604
Grunt	399	Xeniasius californiensis	400
Hake	234	Xerobates Agassizi	158

	Page.		Page.
<i>Xerobates Berlandieri</i>	158	Yellow Pike, name for Pike Perch	417
<i>polyphemus</i>	158	Rock-fish	265
<i>Xiphias gladius</i>	336, 337	Shore-crab of Pacific Coast	765
<i>imperator</i>	357	Sponge	845, 849
<i>Rondeletii</i>	337	Yellow-tail	375
Xiphiidae	336	name for Menhaden	569
<i>Xiphister chirus</i>	251	Runner	332
<i>mucosus</i>	250	California	331
<i>Xiphosura</i>	829, 830	Rock-fish	266
<i>Xylophaga dorsalis</i>	704	Shad, name for Menhaden	569
<i>Xylotrya fimbriata</i>	704, 707	<i>Yoldia limatula</i>	703
<i>Xystreurya liolepis</i>	188	<i>myalis</i>	703
Yarrell, on distribution of the Sea Cat-fish	248	<i>spotilla</i>	703
economic value of Cat-fish	250	<i>thraciformis</i>	703
Yarrow, H. C., on abundance and size of Spanish		Young Harps	62
Mackerel	312	<i>Zalophus</i>	37, 38
distribution of Sword-fish	341	<i>californianus</i>	39, 44, 45
the Spotted Squeteague	365, 366	<i>Zaniolepis latipinnis</i>	268
Yellow Angel-fish	280	Zee-snip	338
Bass	431	Zenids	335
Yellow-bellied Terrapin	155	<i>Zenopsis ocellatus</i>	335
Yellow Cat	627	<i>Zeus faber</i>	224
Yellow-finned Roncador	379	Zeyl-fisch	338
Yellow Fish	268	Zimocca Sponge	545
Grunt	399	<i>Zirphaa crispata</i>	707
Mackerel	324	<i>Zoarces anguillaris</i>	236, 247
Perch	414	<i>viviparus</i>	247
abundance of	414, 415, 416, 417	Zwaard-fis	337
Pickarel	421	<i>Zygodactyla groenlandica</i>	842
Pike	421		