

- Volgian, 760, 790
 Volsella scalpra, 760
 Voltzia, 750, 774; heterophylla, 698, 770*, 773
 Voluntomorpha Eufaulensis, 854
 Voluta, 922; ambigua, 926; athleta, 926; Newcomiana, 915; nodosa, 925; Showalteri, 915; Wetherellii, 925
 Volutillithes Haleanus, 916; limopsis, 896*, 915; rugatus, 896*, 915
 Vosges, 310, 626, 784 (upturnings), 788; Archæan in, 456; Triassic, 768
 Vosgian, 788, 769, 778
 Vraconnian, 859
 Vulcano, 276

 Wangenoceras, 686
 Wabash River, 947
 Wachita Mts. See Ouachita
 Wacke, 80§, 408
 Waders, 141 (easily fossilized), 852, 902
 Wadesboro Triassic area, 741
 Wälderthon, 865
 Wairon series, 770
 Wakes Island, 38
 Walchia, 698, 699, 704, 750; pinniformis, 699, 704, 705*
 Waldheimia, 59; compacta, 690; digona, 790; humeralis, 791
 Wales, 173, 191, 370, 468, 464; eruptions in, 518; upturnings in, 584, 788; geological map of, 694*
 —, Archæan in, 456, 457; Cambrian, 457, 480, 481; Lower Silurian, 517, 518, 520; Upper Silurian, 568, 564, 568, 574; Devonian, 622, 625; Subcarboniferous, 695; Carboniferous, 822, 662, 693, 694*, 695, 696, 784; Permian, 784; Triassic, 768
 Walker's Lake, 757
 Wallala beds, 830, 840
 Walnut clays, 817; sands, 836
 Warrior coal-fields, 648, 657
 Warsaw group, 684, 687, 688
 Wasatch Eocene basin or lake, 860*, 861, 865, 881*, 882, 893
 —limestone, 580, 581, 659
 Wasatch Range, 24, 25, 340, 359, 360* (map), 874
 —, Archæan in, 444, 447; Cambrian, 469; Trenton, 494; Upper Silurian, 541; Devonian, 860*, 861, 862, 580, 581; Carboniferous, 860*, 861, 862; Mesozoic, 880; Triassic, 747; Jurassic, 747, 760; Cretaceous, 860*, 861; post-Mesozoic, 874, 875; Tertiary, 865, 866, 984
 Washakie group or basin, 886, 898
 Washburn, Mt., 276, 296 (height)
 Washington, Mt., Mass., 104, 105*, 528, 580
 Washington, state, mean height of, 23; glaciers of, 240; volcanoes of, 296, 987; coal of, 831; Tertiary in, 885, 892
 Washita epoch or group, 815, 817, 819, 886; limestone, 817, 887
 Water, arrangement of seas, 16; composition of, 71§; characteristics of, 170-171; amount absorbed within the earth, 209; freezing and frozen: glaciers and icebergs, 118, 171, 230-258
 — as a chemical agent, 118; as a solvent, 118, 119, 121, 122; chemical absorption of, 128; carbonic acid in rain, river, and sea, 128
 Water-lime group, 410, 535, 552, 558, 554, 555, 556, 558, 559, 570, 571, 606; American species occurring elsewhere, 569
 Water-line of coasts, 346
 Water-sculpture of mountains, 185§, 186*
 Water-spout, 168
 Waterfalls, 174, 184, 185; in glacier crevasses, 250
 Waterglass, 185§
 Wave-marks, 94§, 588
 Waverly group, 604, 638
 Waves, action and force of, 210, 212; height of, 213, 216; limit of denudation by, 219, 221. See also Tidal wave
 Waynesburg coal-beds, 651, 657, 668, 677
 Weald axis, 936
 Wealden epoch, 858
 Weasel, 924
 Weathering, 128, 186
 Weber, 360*, 361, 362
 — conglomerate, 659; quartzite, 659
 Weevils, 771
 Weisslegende, 697
 Wellenkalk, 769, 778
 Wellington Strait, 544, 552
 Wells. See Artesian; Mineral oil
 Welwitschia, 435, 674; mirabilis, 485*
 Wengen shales, 774
 Wenlock Edge, Scotland, 534
 — group, 463, 519, 568, 564, 565, 566, 567, 568
 — limestone, 563; shale, 568
 Werfen (Werfenian) beds, 769, 773
 Wernerite, 65§
 West Humboldt. See Humboldt
 West India basin, 857
 West Indies, 19, 21, 22, 40 (trends), 145 (coral reefs), 153, 296 (volcanoes), 428, 429, 431, 578, 891 (Miocene)
 West Peak, Col., 266
 West River, 227
 West Rock dike and Ridge, 299*, 302*, 803, 801*, 802, 803, 804* (view), 805, 806, 808
 West Virginia, height of, 23; mineral oil in, 607, 608
 Western border region. See Pacific border
 Western Continental Interior (sea) of N. America, 575, 580, 635, 739, 872; Triassic and Jurassic in, 746-749, 756-768; Cretaceous, 818*, 814, 867, 878, 880; Tertiary, 880
 Western Isles of Scotland, 288
 Westphalia, 627; coal-beds, 696
 Wetterstein, 774
 Whale-bone Whales, 912*§, 925
 Whales, 56, 144, 415, 902, 908, 912, 927 (toothed), 931; ear-bones of, dredged, 144
 Whetstone, 80§
 Whip-snake, 682
 White ants, 159
 White Bluff bed, 889
 White Cliff group, 747
 White Fish River, 445
 White Island, eruption, 874
 White Lias, 774, 790
 White Mts., N. H., landslide in, 208; incipient glacier in, 284; Arctic plants of, 945, 946
 White Pine district, 495
 White River, 894, 901
 White River beds, 884, 886, 893
 White Sea, 521, 768
 Whitfieldella didyma, 567; nitida, 548*, 551; oblata, 549
 Whitney, Mt., 810
 Whittlesey, 689; elegans, 674
 Whortleberry, 921
 Wianamatta shale, 699
 Wichita, 660
 Wight, Isle of, 920, 926
 Wild Boar, 54, 902, 927
 Willamette River, 30
 Willoughby, Mt., 945
 Willow, 837, 859, 879
 Willow Creek beds, 830
 Willow River limestone, 498
 Wind, 89; denudation by, 159
 Wind-drift coral rocks, 151; structure, 93*§, 162
 Wind-made waves and currents, 166, 212, 216
 Wind River basin and group, 884, 886, 898, 918; Mts., 240 (glaciers), 689, 748, 945
 Windsor series, 639
 Windward Islands, 44
 Winnipeg Lake, 29, 199, 200, 515, 524, 552; climate of, 944; discharge into the Mississippi, 947; in the Champlain period, 985
 Winnipegosis (Lake), 594
 Winooski limestone, 467, 472
 Wisconsin, 23 (height), 586, 944 (rainfall); lead mines, 842, 522
 Wodnika striatula, 707
 Wolf, 924, 927
 Wolf Creek conglomerate, 605
 Wood brought down by rivers, 191; carbonized, 892; composition of, 74, 128, 713; decomposition of, 123, 124, 613; silicified, 125, 185, 148, 280, 300, 892 (see also Petrifications)
 Woodchuck, 915
 Woodocrinus elegans, 640*, 646
 Woodpecker, 902
 Wood's Bluff beds, 888
 Woodville sandstone, 657
 Woodwardia latiloba, 839
 Woolhope beds, 568
 Woolwich beds, 925
 Worcester, Mass., 453, 461, 688, 685, 646, 658, 714, 782