

- Snakes, 415, 848; Carboniferous, 726; Cretaceous, 848, 870; Tertiary, 202, 901, 923
- Snow-drifts, 162
- Snow-line on heights, 233, 234
- Soapstone, 67§, 68, 89§
- Society Islands. See Tahitian
- Soda, 61§; in plants, 74, 75
- Soda-granite, 86§
- Soda Springs, Idaho, 746
- Sodalite, 81, 85, 449, 876
- Sodium, 61, 63, 120
- Soil, 81§; moved by frost, 231
- Solarium ornatum, 866; planorbis, 886; trilliratum, 916
- Solemya, 602
- Solen, 425§, 916, 917
- Solen beds, 892
- Solenhofen, 776, 788, 784, 786, 788, 796, 852
- Solenoceras annullifer, 854
- Solenomya radiata, 690; vetusta, 590 (first known)
- Solenopora compacta, 514
- Solfataras, 128, 265, 278, 283, 298§, 295, 334
- Solidification, 258, 264, 326; of the earth, 376
- Solids, flow of, 351-352
- Solitaire, 1014
- Soloman Islands, 86, 38, 156
- Solution, 118-122
- Solva group, 481
- Somma, Mt., 276, 291
- Sonora, 747, 748 (gold placers), 749, 755, 756
- Sorata, Mt., 27
- Sorrel, 945
- Souris River beds, 880
- South Africa, 406; united with India, 873, 937; and Australia, 874, 937; no folds, 948; Paleozoic in, 699; Carboniferous, 699; Permian, 698, 699, 707, 737; Triassic, 707, 737, 770, 773, 791; Jurassic, 791; Quaternary, 1019
- South America, 16, 18; mean height of, 23; surface features of, 30; volcanic cones of, 274; elevations of, 347, 874, 877; cordilleras, 390; folds of, 948; Archæan in, 442, 456; Cambrian, 458; Devonian, 627; Carboniferous, 632, 659, 693, 711; Cretaceous, 857, 867; Tertiary, 365, 456; elevation during, 927, 935; post-Mesozoic mountain-making, 374; Glacial, 948
- South Carolina, mean height of, 23; phosphatic deposits of, 153; earthquakes of, 373
- South Dakota, mean height of, 23; Cambrian in, 464, 468, 476; Niagara, 541; Cretaceous, 828, 833, 856; Tertiary, 909
- South Mtn., Pa., 465, 532
- South Park, 495, 886, 893
- South Shetlands, 296 (volcanoes)
- Spain, plateau of, 26; volcanoes of, 296; Cambrian in, 484; Lower Silurian, 518; Upper Silurian, 568, 573; Subcarboniferous, 693; Carboniferous, 693; Jurassic, 775, 793; Cretaceous, 857; Tertiary, 920, 932
- Spalacodon, 926
- Spalacotherium, 789*
- Spanish Peaks, 296, 313, 876
- Sparnacian group, 925
- Spathiocaris Emersoni, 620, 621
- Species, difference in, attending difference in environment, 402
- Specific gravity in relation to fusibility, 304
- Specular iron, 70, 83, 578; rocks, 83
- Specton Cliffs, 865
- Sperm Whale, 912
- Spermatophilus Eversmani, 156
- Sphærexochus, 521; mirus, 520, 565*; parvus, 503
- Sphærium, 152, 856
- Sphæroceras, 760
- Sphærocystites, 562
- Sphærophthalmus, 481
- Sphærospongia, 596; tessellata, 597*, 601
- Sphærozoum orientale, 438*
- Sphærolites, 861; Hœninghausi, 861*; Texanus, 886
- Sphagnum, 73 (ash), 153; commune, 74
- Sphalerite, 70§, 125, 333, 340, 542, 637
- Sphenacodon, 688
- Sphene, 67
- Sphenella glacialis, 699
- Sphenodiscus lenticularis, 854; pleurasepta, 855
- Sphenodon, 687; punctatum, 54
- Sphenolepidium, 831; Virginicum, 834
- Sphenophyllum, 639, 671, 685, 698, 699, 704; antiquum, 622; emarginatum, 659; filiculme, 692, 693; longifolium, 689, 704; Schlotheimi, 671*, 689; vetustum, 583*
- Sphenopteris, 639, 671, 685, 689, 693, 698, 699, 704; arguta, 791; cristata, 645; flaccida, 626; furcata, 689; Gravenhorstii, 670*, 689; Grevillioides, 838; Hartti, 622; Hildrethi, 670*, 689; Hitchcockiana, 622; Hœninghausi, 622; Hookeri, 626; Humphriesiana, 626; Mantelli, 831, 832*; Schimperii, 704; spinosa, 689; tridaetylites, 689; Valdensis, 834
- Sphenopterium obtusum, 646
- Sphenotus, 621; contractus, 621
- Spherophytic, 77§; rocks, 83§, 84
- Spherulites, 84, 96, 97, 289, 338
- Sphyradoceras, 591
- Sphyrenids, 843
- Spicules of sponges. See Spongespicules
- Spiders, 141, 163, 420, 525, 722, 723, 724; Upper Silurian, 574; Devonian, 575; Carboniferous, 657, 674, 677, 701, 722 (first); Paleozoic, 722, 723, 727; Tertiary, 893, 901
- Spinax Blainvillii, 416*
- Spinel, 313, 449, 453
- Spirifer, 310, 401, 425§, 426*§, 550, 561, 562, 568, 579, 592, 606, 642, 705, 719; acuminatus, 585*, 590, 591; alatus, 707; altus, 612; arenosus, 578*, 579; arrectus, 579; asper, 602; binesialis, 602; biplicatus, 642*, 646; borealis, 758; canaliferus, 625; cameratus, 675*, 685, 690; Clannyanus, 707; Conradanus, 591; Cooperensis, 646; crispus, 563, 567, 568; cultrijugatus, 626, 627; curvatus, 625; cuspidatus, 703; cyclopterus, 562, 563; decussatus, 626; disjunctus, 370*, 592, 612, 613*, 621, 622, 625, 626, 628, 703; Dumonti, 626; duodenarius, 591; elevatus, 567, 568; exporrectus, 520; fimbriatus, 591, 601, 602; fragilis, 773, 774; giganteus, 370*; glaber, 627; 700*; glaber (var. contractus), 647; granulliferus, 601; gregarius, 585*, 590, 591; Hungerfordi, 602; hystericus, 625; incrassatus, 704; increbescens, 642*, 646; Keokuk, 646; levicostatus, 625; lævis, 612*; lineatus, 690, 704; Loganii, 646; macropleurus, 560*, 561, 562, 563; Marionensis, 602, 646; Meeki, 646; mesacostalis, 620; mesastrialis, 620; mucronatus, 601; Münsteri, 774; Niagarensis, 548*, 551, 563; Parryanus, 602; pennatus, 508*, 602; perlamellosus, 562, 563; plicatellus, 520; pyxidatus, 579; radiatus, 522, 550, 551; raricosta, 592; speciosus, 703; striatus, 426*; sulcatus, 548*, 551, 562, 563, 567; Uirii, 626, 627, 707; Vanuxemi, 558; varicosus, 592; Verneuili, 626, 627, 628; Whitneyi, 602
- Spiriferids, 574
- Spiriferina, 756, 790; cristata, 707; Kentuckensis, 690; octoplicata, 707; spinosa, 642*, 646, 647; Walcottii, 779*, 790
- Spirifersandstein, 570
- Spirocyathus Atlanticus, 470*
- Spirophyton, 601, 688; caudagalli, 582*, 667, 688
- Spirorbis, 675; arietinus, 691; carbonarius, 676*, 691; latus, 558
- Spitzbergen, 48, 395, 758; Subcarboniferous in, 696, 704; Carboniferous, 635, 696, 704, 711; Permian, 704; Triassic, 768, 774, 792; Jurassic, 776; Cretaceous, 868, 872 (climate); Tertiary, 922, 930 (Sequoia)
- Spodumene, 321, 332, 449
- Spondylus, 130; gregalis, 854; spinosus, 866
- Sponge-beds, 777, 790
- Sponges, Sponge-spicules, 57, 64, 72, 140, 141, 419, 431§, 432*, 474*, 513, 515, 583*, 590, 596, 601, 611, 777, 860*
- Spongilla, 432
- Spongiolithis appendiculata, 894*
- Sporangi in coal, 655*
- Sporangites, 601; Corniferous, 584;