raines of, 100; in the Alps, 97; in Greenland, 97; Humboldt glacier, 98; former extent of, 141; in Wales and Scotland, 142; in New England, 142; strim of, 100; cause of their motion, Glacier theory, 154; action, 97; period, Globe, its earliest state, 203; once all melted, 194; when first inhabited, 227; improved by change, 881. Glyptodon, 350. Gneiss, 61; porphyritic, 61; for agricultural purposes, 403. Gold, where found, 56; in what rocks, 56; in the United States, 57, 413, 415; in California, Russia and Australia, 57; recently introduced into the rocks, 56, 879; its amount obtained in 1854, 57; theory of its origin, 56. Goniatites, 268. Gorge or Canon defined, 40; on Niagara, Genesee, Potomac, Mississippi, Mis-souri, the Rhine, the Danube, &c., 109; on Red River, 110; on Cox River, 110; on the Colorado, 110. Gould, A. A., on tracks, 356. Graham Island, 178. Granite defined, 78; porphyritic and graphic, 78, 79; concretionary and tabular, 79; its origin, 228; its economical use, 52; has been protruded solid, 78; water concerned in its production, 228; for structures, 403. Granitic Group, 42, 77, 78. Granitic veins, 218. Graphite, 54. Graptolites, 249. Gray, Prof. Asa, his classification of plants, 236. Graystone lava, 84. Greenland, undergoing a see-saw movement, 200; its glaciers, 97 Green Mountain Giant, 183. Greenstone described, 82; columnar, 85; in Mts. Holyoke and Tom, 87; on the Hudson, 88; in Oregon, 88; on Lake Superior, 87; and basalt in Iceland, 85; in North Carolina, 88. Green sand described, 69, 70; its use in agriculture, 70. Gres bigarre, 68 Group defined, 38. Guadaloupe, fossil, man in, 853. Guano, 405 Gypsum, 51; where found, 52. HABITABILITY of other worlds, 210. Hade, 894.

H.
HABITABILITY of other worlds, 210.
Hade, 394.
Hadrosaurus, 827.
Hall, Prof., his system of the New York rocks, 43; his discoveries in the Graptolites, 250.
Halsystes, 260.
Halystehnus, 313.
Hammers, Geological, 46.
Hamilton Group, 65.
Hamilton, 297.
Hare, fossil, 840.
Hastings sand, 69.

Hawaii, volcanic, 179. Hedge hog, fossil, 840. Helderberg Group, 64, 412. Herculaneum buried, 178. Hexapodichnus, 315. Hippopotamus, fossil, 888, 849. Hippurites, 824 Historic Period, 71, 162. Hog, fossil, 888. Holyoke, Mt., trap of, 87. Holoptichnus, 271. Hornblende and augite, 50: schist, 62. Hornitos, 173. Hornstone, 82; porphyry, 82. Horsebacks or Escars, 147. Horse, fossil, 349. Hudson River Group, 64. Human remains in rock, 852; in caverns, 354; in alluvium, 354; whether preadamic, 355... Humboldt glacier, 106, 98. Hummock on Holyoke, 187. Humus, in soil, 165. Huronian rocks, 60, 63, 411. Hutton, on veins, 396. Hyæna, fossil, 349. Hydatina, 852. Hydrate of iron, 122; of manganese, 123. Hydra with many heads, 249. Hydrogen in the earth, 47. Hypanthocrinus, 262. Hypersthene rock, 82. Hypogene rocks, 60. Hypozoic rocks, 60.

Ice caverns, 153. Ice islands, 108; floes, 107; rafts, 107; belts, 107; icebergs, 107; foot, 107. Ico preserved by lava, 180. Ichnolithology, 243.
Ichnology, 243; history of, 244; principles of, 245. Ichthyocrinus, 262. Ichthyopodulites, 286. Ichthyosaurus, 303. Icthyodorulites, 284. Igneous agency, 170. Igneous rocks, 42, 77; in North America. Iguanadon, fossil, 805; tracks of, 820. Iguana, 805. Improvement in the earth's condition, 874. Inclination of strata, 20. Index palæontologicus, 357. Inferences from palmontology, &c., 870. Infusoria, 851; Agassiz; views of, 289; fossil, 165, 248; Owen's views of, 289; from Berlin, 852; from Vermont, 852; from Richmond, 852. Inoceramus, 325. Insects, fossil, 282; eyes of, 256; in the different formations, 282; in the Connecticut Valley, 801. Instability the means of stability, 881.

Intensity of geological causes, 875. Internal heat of the earth, 188; proofs of,

Interior of the earth in a melted state, 191;

189; objections to, 193.

Interposition Divine special, 880.

proofs of, 191.

ICERERG, 104; theory, 154.