

## PER

- Permian rocks, 306–308  
 — shells, 147  
 — sun-cracks and rain-pittings, 146  
 Phillips, Professor, on denudation of Holderness, 484  
 Physical geography and geology, relations of, 2  
 — — — Cambrian epoch, &c., 67  
 — — — Lower Silurian, 77–81, 86–87  
 — — — Carboniferous, 133–138  
 — — — Lower Oolites, 195–197  
 — — — old continental phase of, 157  
 — — Purbeck and Wealden epoch, 202, 208–211  
 Physiography before glacial epoch, 503  
 Pictish Gael, 582  
 Pipe-clays, Eocene, 609  
 Plains of marine denudation, 341–343, 496–499  
 Plants and lignite, Inferior Oolite Sands, 192  
 Playfair, on Hutton's generalizations, 280  
 — — lakes, 437  
 Pliny, 277  
 Pliocene strata, 270–276  
 Plot, Dr., geological ideas of, 277  
 Pont-y-gromlech, *roche moutonnée* and *blocs perchés*, 427  
 Portland beds, and fossils, 186, 190, 191, 202–206  
 Post-glacial rivers, 531  
 Pre-glacial valleys and coal, 531  
 Prestwich, Professor, on Thanet sand, 239  
 — — — Bristol coal-field, 597  
 — — — Brixham cave, 479, 480  
 — — — flint implements and mammoth, 538  
 — — — fossils of Crag, 271, 275, 357  
 — — — Oldhaven beds, 244  
 — — — shells between boulder-clays, 413  
 — — — tertiary outliers, North Downs, 345

## RIV

- Prestwich, Professor, on Thames at Kingston, 557, 558  
 Price, Williams Mr., on duration of coal, 604  
 Primitive strata, so-called, 43–45  
 — — old theory of, 86  
 Pseudomorphs of salt crystals, and sun-cracks, 160  
 Purbeck and Wealden series, 201–211, 310  
 — beds, fossils of, 203–205  
 — Isle, disturbance of strata, 347  
 — limestone, 187, 202  
 — marble, 203  
 — — outliers of, Buckinghamshire, &c., 209  
 Purfield beds, 223
- RACES** of men in Britain, 579–589  
 Radiation of heat and shrinkage of earth's crust, 45, 46, 49  
 Rain and rivers, Wealden, 341–344  
 Rainfalls, Britain, 492–494  
 Rathlin and glacier-ice, 399  
 Ray, on degradation of land, 10  
 Reculvers, denudation at, 485  
 Red chalk, 213  
 Reid, Mr., on denudation of Cromer coast, 484  
 — — Crag and fossils of, 270, 271  
 — — rocks and lakes, 61  
 Rhaetic beds, and fossils of, 158–165, 309  
 — — Brora, 198  
 Rhine, 499, 526, 543  
 Rhone, delta of, 426  
 — glacier, thickness of, 440  
 Ribble, 522  
 — Fells near, glacial striations, 399  
 — north of, shell-beds, 414  
 Riley, Dr., and Stutchbury, fossils in Magnesian conglomerate 153–155  
 Rivers and valleys, geological dates of, 496–529  
 — and gravels, 530, 536–542  
 — areas of drainage, 584