usually composed of sand with shells, belonging to the Older Pliocene period.

CRATER. The circular cavity at the summit of a volcano, from which the volcanic matter is ejected. *Etym.*, *crater*, a great cup or bowl.

CRETACEOUS. Belonging to chalk. *Etym.*, *creta*, chalk.

CROP OUT. A miner's or mineral surveyor's term, to express the rising up or exposure at the surface of a stratum or series of strata.

CRUST OF THE EARTH. See "Earth's crust."

CRUSTACEA. Animals having a shelly coating or crust which they cast periodically. Crabs, shrimps, and lobsters, are examples.

CRYPTOGAMIC. A name applied to a class of plants, such as ferns, mosses, sea-weeds, and fungi, in which the fructification or organs of reproduction are concealed. *Etym.*, κρυπτος, *cryptos*, concealed, and γαμος, *gamos*, marriage.

CRYSTALS. Simple minerals are frequently found in regular forms, with facets like the drops of cut glass of chandeliers. Quartz being often met with in rocks in such forms, and beautifully transparent like ice, was called *rock-crystal*, κρυσταλλος, *crystallos*, being Greek for ice. Hence the regular *forms* of other minerals are called crystals, wether they be clear or opaque.

CRYSTALLIZED. A mineral which is found in regular forms or crystals is said to be crystallized.

CRYSTALLINE. The internal texture which regular crystals exhibit when broken, or a confused assemblage of ill-defined crystals. Loaf-sugar and statuary-marble have a *crystalline*, texture. Sugar-candy and calcareous spar are crystallized.

CUPRIFEROUS. Copper-bearing. *Etym.*, *cuprum*, copper, and *fero*, to bear.

CYCADEÆ. An order of plants which are natives of warm climates, mostly tropical, although some are found at the Cape of Good Hope. They have a short stem, surmounted by a peculiar foliage, termed pinnated fronds by botanists, which spreads in a circle. The term is derived from κυκας, *cycas*, a name applied by the ancient Greek naturalist Theophrastus to a palm.

CYPERACEÆ. A tribe of plants answering to the English sedges; they are distinguished from grasses by their stems being solid, and generally triangular, instead of being hollow and round. Together with *Gramineæ* they constitute what writers on botanical geography often call *glumaceæ*.

DEBACLE. A great rush of waters, which, breaking down all opposing barriers, carries forward the broken fragments of rocks, and spreads them in its course. *Etym.*, *débacler*, French, to unbar, to break up as a river does at the cessation of a long-continued frost.

DELTA. When a great river, before it enters the sea, divides into separate streams, they often diverge and form two sides of a triangle, the sea being the base. The land included by the three lines, and which is invariably alluvial, was first called, in the case of the Nile, a delta, from its resemblance to the letter of the Greek alphabet which goes by that name Δ. Geologists apply the term to alluvial land formed by a river at its mouth, without reference to its precise shape.

DENUDATION. The carrying away by the action of running water of a portion of the solid materials of the land, by which inferior rocks are laid bare. *Etym.*, *denudo*, to lay bare.

DEOXIDIZED, DEOXIDATED. Deprived of oxygen. Disunited from oxygen.

DESICCATION. The act of drying up. *Etym.*, *desicco*, to dry up.

DETRITUS. Matter worn or rubbed off from rocks. *Etym.*, *de*, from, and *tero*, to rub.

DICOTYLEDONOUS. A grand division of the vegetable kingdom, founded on the plant having two *cotyledons*, or seed-lobes. *Etym.*, δις, *dis*, double, and κοτυληδον, cotyledon.

DIKES. When a mass of the unstratified or igneous rocks, such as granite, trap, and lava, appears as if injected into a rent in the stratified rocks, cutting across the strata, it forms a dike. They are sometimes seen running along the ground, and projecting, like a wall, from the softer strata on both sides of them having wasted away; whence they were first called in the north of England and in Scotland *dikes*, a provincial name for wall. It is not easy to draw the line between dikes and veins. The former are generally of larger dimensions, and have their sides parallel for considerable distances; while veins have generally many ramifications, and these often thin away into slender threads.

DILUVIUM. Those accumulations of gravel and loose materials, which, by some