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TABULAR VIEW

OF THE SUBSTANCES, WHICH CONSTITUTE THE MINERAL SOIL OF THE EN

Simple minerals.

Acidiferous substances.

Carbonated lime.

A *Lamellary* (calcareous spar), forming veins in wacke (34), kernels or globules in amygdaloid (38), in amphiboloid (9).

B *Compact* (Lime stone), in thin veins in argilloid (30).

N. B. Some salts diluted in spring water (3) excepted, carbonated lime is the only acidiferous substance I have observed in the environs of Boston, where it appears existing but in a very slight quantity.

Earthy substances.

Quartz.

A *Hyaline* (rock crystal), often found with crystalline shape (var. prismoid) in the cavities of some blocks scattered on the surface of the soil.

B *Compact*, most often *opaque* (hornstein of Werner) very diversified in its colours. The variety A is found sometimes mixed with chlorite talc, and also with epidote. In this last case it constitutes the *praser* of Germ. (Brighton, Menotomy). Quartz is one of the elements of several rocks, and is found frequently disposed in veins running across them.

Felspar.

One of the predominant elements of the rocks, which constitute the frame of the country, commonly with a lamellary texture, with a great diversity of colours; found with crystalline shape (var. ditetraedral) accompanied with epidote and asbestos. (Brighton).

Amphibole. (Hornblende Wer.)

One of the most diffused elements of the rocks of Massachusetts; commonly with a lamellated texture, and a dark blue or black colour. (4 to 19).

Epidote (Glassy actinolite Kirw. Glasartiger Hahlstein Wer.)

A *Crystallised*, sometimes in six sided prisms deprived of summits (the diameter of the prisms about 4 or 5 lines, Brighton) or in four sided rhomboidal prisms, the measure of the angle of which agrees with the primitive form of this substance. (Swt. Elements of Haüy) or in small striated longitudinally needles, imbedded in carbonated lime (Brookline), but more frequently

B *Compact*, disposed in veins, running across several rocks, (9, 16—21) or forming one of their elements (9—16). Its common colour is green of several shades.

Mica.

One of the elements of some varieties of rocks, as felsparoid, amphiboloid (11, 17), but commonly in small proportion. Its common colour is whitish, smoaky, yellow of brass.

Asbestos.

A *Flexible* (vulg. amiant) with a yellowish white colour. It accompanies epidote and crystallised felspar (Brighton ○). Its gang is argilloid or epidotic amphiboloid.

B Stiff (Actinolite Kirw.), with a greenish colour. The gang is argilloid (Newton ▭).

Earthy substances.

Talc.

A Laminary, in small hexaedral lamina, of a bright geen colour (12).

B Chlorite (chlorit erde Germ.). It accompanies carbonated lime, laminary, and quartz. (Brighton) (38). This last variety, which appears abounding in some places, may afford a solid green colour for painting. (An essay of this colour is sent to the Academy).

Garnat.

Commonly in small trapezoidal crystals in some loose fragments of felsparoid.

Tourmaline.

Found, scarcely, in some loose pieces of felsparoid (Dorchester), sometimes with the form belonging to the variety isogone.

Emerald.

Some loose fragments of felsparoid give some signs of this substance.

N. B. These three minerals, found in great plenty in other parts of North America, may be considered here, as exceptions.

Combustible sub.

Peat.

Found in great plenty in several parts of the environs of Boston, principally in places where stagnant waters in contact with aquatic vegetables favour their decomposition, so soon as they are deprived of their vegetative faculty.

No signs of other combustibles found yet in the compass of twelve or fifteen miles from Boston.

Metallic substances.

Copper.

1 *Pyritous* (Kupferkies of Germ.). Its matrix is quartz, which accompanies amygdaloid (38) generally in small particles, but some signs more worthy of attention found in the north west direction.

2 *Carbonated green* (vulg. malachite) in light spots, which accompanies the preceding var. sometimes disseminated in the whole mass of amygdaloid (38), or coating some faces of its fragments.

Iron.

1 *Oligist.* (Specular iron ore Kirw.). In small lamina in some fragments of quartz (27, 38).

2 *Oxyduled.* (Magnetic iron ore Kirw.) (17).

3 *Arsenical* (Mispikel of many miner.), sometimes prismatic, common matrix argilloid, or petrosilex (24).

4 *Sulphurated* (common pyrites), often crystallised in cubes, gang. commonly argilloid or petrosilex (24).

A Sulphurated magnetic (vulg. magnetic pyrites), embodied commonly in amphiboloid (4).

5 *Carbonated.* (Brown spath of Germ.), found but rarely in small lenticulary or rhomboidal crystals (27, 35).

Manganese.

Oxyded black and brown, forming mamellary concretions on the surface of some rocks, as petrosilex argilloid (24), or in superficial dendrites. Manganese appears the chief colouring body of most of the minerals and rocks of this part of America.

Primordial soil.

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Alluvial deposits.

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TABULAR VIEW

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Simple minerals.

Aggregate minerals.

Earthy substances.

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Primordial soil.

Amphiboloid.

1 Common (5).
2 Granitic (6)] analogous to the black granite of the ancients. Granito nero of Italians.
3 Trappine (7), when of a fine grain it affords the touch-stone, and may be confounded with lapis lydius.
4 Porphyritic (8).
A Ophites (9), analogous to the porfido verde antico-ophites of the Greeks.
5 Epidotic (9), analogous to the Egyptian basalt.
6 Quartzous (10), when uniform in its texture and colour, it may be used, as well as the species 3, as touch stone. Many Indian's axes consist of this species.
7 Micaceous (11).
8 Talcous (12).

Felsparoid.

1 Common (14).
2 Quartzous (15).
3 Epidotic (16).
4 Granitic (17).

Petrosilex.

Single with a great variety of calours.
1 Flinty (20).
2 Novacular (23), a variety perfectly analogous to Turkey stone.
3 Sonorous (21) Klingstein of Germans.
4 Jasper (22).

Porphyritic.

A Deep red, analogous to the antique red porphyry (27).
B Reddish brown (26).
C Greenish (27).
D Brown black (27).
E Black analogous to the black porphyry. *Porfido nero.*

Argilloid.

1 Common (29).
A Compact.
B Foliated.
α Grey.
β Greenish.
γ Blackish.
2 Novacular (29) susceptible of being used as turkey stone.
A Whitish.
B Brownish.
C Veined, formed of white and brownish red layers.

Wacke.

1 Porphyritic (33).
A Breccia, sometimes analogous to antique breccia. Diaspro breciato of Italians (33).
B Granulated (34) α greyish (Grauwake of Germ.)

Amygdaloid.

1 Common (38), sometimes analogous to the toad stone of the English.

Alluvial deposits.

Consisting of fragments of rocks, which form the frame of the country (2), sand and clay.