

DUNYTE, PERIDOTYTE. — Eruptive and metamorphic. Consists almost wholly of chrysolite. Often changed in part or wholly to serpentine. $G = 3.31$. From Mount Dun, New Zealand; Macon County, N.C.

AMPHIBOLYTE. — Metamorphic. Consists chiefly of hornblende, with more or less quartz, and sometimes chlorite. Coarse or fine-grained; hornblende sometimes acicular. Massive or schistose. Graduates often into chlorite schist and mica schist. *Actinolyte* consists chiefly of green actinolite. Bernardston, Mass., and Vernon, Vt.

GLAUCOPHANYTE. — Metamorphic. Consists chiefly of the blue soda-bearing hornblende-like mineral glaucophane, with some black mica; sometimes epidotic. From Saxony; Isle of Syra; New Caledonia; California.

V. Hydrous Magnesian and Aluminous Rocks.

CHLORITE SCHIST. — Metamorphic. Schistose. Dark green to grayish green and greenish black. Little greasy to the touch. Consists largely of chlorite, with usually some quartz and feldspar intimately blended. Often contains magnetite in crystals.

CHLORITE-ARGILLYTE. — Metamorphic. An argillyte-like rock (phyllyte) consisting chiefly of chlorite.

TALCOSE SCHIST. — Metamorphic. Schistose. Feels soapy. Consists chiefly of talc. Not common except in local beds, most of the so-called "talcose slate" being hydromica (sericite) schist.

STEATYTE (Soapstone). — Metamorphic. Schistose or massive. Consists of talc, often with impurities. Gray to grayish green, white. Easily cut with a knife.

SERPENTINE. — Metamorphic. Massive. Aphanitic. Easily scratched with a knife. Oil-green, dark green to greenish black; also of pale shades to whitish. Feels a little greasy, especially the powder. This metamorphic rock has been made from various chrysolitic, augitic and hornblendic rocks that were both of eruptive and metamorphic origin.

OPHIOLYTE (Verd-antique). — Metamorphic. Limestone or marble colored with or containing disseminated serpentine; clouded or spotted with green. West of New Haven, Conn.; Port Henry, Essex County, N.Y.

PYROPHYLLYTE SCHIST. — Schistose or massive. Microcrystalline or aphanitic. Feels soapy and looks like a whitish or greenish steatyte, but consists of the hydrous aluminous mineral, pyrophyllite, whose atomic or oxygen ratio is the same as that of the hydrous magnesian mineral, talc. Deep River region, N.C.

II. TERRANES: THEIR CONSTITUTION, CHARACTERISTICS, POSITIONS, AND ARRANGEMENT.

More than nine tenths of the rocks of the earth's surface are fragmental in origin. From the time of the first existence of an ocean, the formation of fragmental deposits, through the grinding action of waves and currents, fresh-water streams and winds, aided by the natural decay of the rocks, has gone forward wherever there were rocks exposed to this action. Thus beds of sand, gravel, mud, or clay—that is, fragmental deposits—have been forming, when the conditions favored, through all the geological ages. And those of ancient sea-borders, rivers, valleys, lakes, and plains are like the modern in all respects, even to the frequent ripple-marks over the surface of beds, and the occasional footprints of animals. Wherever igneous ejections have filled the air with volcanic sand or ashes for the winds to drift away, this sand has added to the material of fragmental deposits. Wherever there was nothing for the moving waters to grind up except shells,