

volcanic material at at least four distinct horizons, proving the activity for an immense period of the volcanic forces along this portion of the Pacific margin. Lastly, the sometimes almost insuperable difficulty of distinguishing between volcanic rocks of different periods when they have suffered a like degree of metamorphism, and the inappropriateness of attempting to apply lithological standards, which have in eastern America or elsewhere been found locally useful in distinguishing between different series of crystalline rocks, in a region characterized by the abundance of easily crystallizable volcanic materials, and in which rocks of as late date as the Carboniferous have suffered a degree of metamorphism comparable to that of the Huronian or altered Quebec group of Eastern Canada.

---