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Guidebooks Series, Volume 162. This traverse across the Northern Appalachians from the environs of Burlington, Vt. to Portsmouth, N.H. (fig. 1) demonstrates a geology which reflects the following tectonometamorphic and/or magmatic events: 1 Grenvillian (Precambrian Y) orogeny, best seen in the Adirondack Mountains of northeastern New York, but also apparent in the cores of the Green Mountain and Lincoln massifs of west-central Vermont and the Chester-Athens and Sadawga-Rayponda domes of southeastern Vermont: 2 Avalonian (Precambrian Z) orogeny, evidenced by the Massabesic Gneiss and related rocks of southeastern New Hampshire; 3 Taconian (Mid-Ordovician) tectonism and metamorphism (the Taconic Mountains of western Vermont and eastern New York lie immediately south of our line of traverse); 4 Acadian orogeny (Early to Middle Devonian) - clearly the major tectonic, magmatic, and metamorphic event in this region, and best illustrated by geologic relations in New Hampshire and Maine: and 5 Mesozoic rifting, accompanied by the emplacement of ring-dikes and stocks of the White Mountain (Jurassic and Cretaceous) plutonicvolcanic complexes, chiefly in New Hampshire (figs. 2 and 3). Not to be seen are some Mississippian (325 Ma.) plutons of eastern New Hampshire and western Maine, and a Permian (275 Ma.) intrusive of south-central New Hampshire. The latter age is intriguing, because it is

identical to that of granite cutting the Carboniferous (Westphalian) Narragansett Basin of southeastern New England, which was deformed and metamorphosed during the Alleghenian orogeny.