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INTERSTRATIFIED CLAYS AS FUNDAMENTAL PARTICLES: A REPLY

Key Words—Illite, Interstratification, Smectite, Transmission electron microscopy, Vermiculite, X-ray powder diffraction.

We agree with Sawhney and Reynolds' (1985) comment that the formation mechanism for interstratified mica/vermiculite which occurs as a pedogenic transformation product from parent mica (predominantly biotite) in soils is different from the diagenetic neoformation mechanism of Nadeau *et al.* (1984a, 1984b, 1985) proposed for the formation of interstratified illite/smectite in sediments and sedimentary rocks. Because it may be important to draw such distinctions, Wilson and Nadeau (1985) have directly addressed this issue. Sawhney and Reynolds' discussion should not imply, however, that all interstratified clays in soils are pedogenic transformation products. On the contrary, it is almost certain that many interstratified clays in soils are diagenetic products inherited from parent sedimentary materials.

Much work remains to elucidate fully the nature of interstratified clays, and some materials no doubt have complex mechanisms of formation. In any case, clay mineralogists should be aware that no single mechanism can adequately explain the formation of the wide variety of interstratified materials that occur in soils and sediments.

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