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# Myrmekites From the Haast Schists, New Zealand: A Reply

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Rather than commenting on the Haast myrmekites in particular, Phillips raises the following four points for general discussion: how much weight is to be given to the proposed proportionality relationship in myrmekite; is myrmekite polygenetic; are my proposals of 1964 and 1973 the same; should the Haast intergrowths be called myrmekite? These are dealt with in turn below.

Phillips *et al* (1972, p. 577) write: "Thus the simple proportionality relationship implied by equation 1 (Schwantke's hypothesis) may not pertain, and Shelley's (1969) objections are probably justified for particular types of myrmekite." The amount of faith one can put in reported proportionality relationships clearly depends on the answers to the two questions: "How often does it not pertain?" and "Why does it not?" There is little incentive to quantify or report a relationship when it does not exist, and this leads me to believe it is not yet possible to give confident answers. Ashworth (1972), using data from a single suite of rocks, gives what is probably the best available evidence for proportionality. He nevertheless expresses the need for caution when he writes (p. 45) "one must avoid the danger of a circular argument which dismisses deviant examples as being improper material for discussion."

Phillips has misread the last paragraph of my paper if he construes it to mean "myrmekite is not polygenetic"; and my statement "resorting too frequently to the answer that myrmekite is polygenetic may often mean nothing but special pleading" is intended as a general plea for adherence to the basic principles of simplicity and parsimony in the use of hypotheses (Popper, 1959). A most satisfying illustration of these principles is given by Ashworth (1972) who shows that myrmekites formed according to any of the metasomatic or exsolution hypotheses (*i.e.* polygenetic) are produced as a result of kinetic impediment to Al,Si diffusion (and therefore may be considered fundamentally monogenetic). In the same way, I attach more importance to the common principle proposed in my 1964, 1970, and 1973 papers (namely that a recrystallizing ground-mass mineral may be included as rods in a porphyroblastic growth) than to the particularities of each and every case (namely, origin and type of both ground-mass and porphyroblastic mineral).

I clearly state (1973, abstract) that the Haast "myrmekites" differ from common myrmekites in a number of ways. However, until the origin of either type can be finally decided, I believe a multiplication of names would only serve to conceal their obvious similarities, and hinder the appreciation of any common factors in their origin.

## References

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