APHETOSPORA Lo 1980

Genus *Aphetospora* n. gen.

Type species. Aphetospora euthenia n. sp.

Diagnosis. Spheroidal to ellipsoidal cell-like units. Surface smooth, light-brown or containing numerous submicron-sized opaque spots randomly scattered on the surface. Wall distinct, solid and thin, less than 1 μm in thickness, red-brown, or not well defined, preserved as interrupted surface. Habit commonly solitary, less frequently connecting or overlapping in uniseriate aggregates two to four cell-like units long, or a few loosely and irregularly attached together. No distinct clustering in colony-like arrangement observed. No individual envelopes or encompassing amorphous matrix observed. Dimensions of spheroids and of long axis of ellipsoids 2.3—19.5 μm, averaging 7.8 μm (standard deviation = 3.8 μm; 260 specimens measured).

Etymology. With reference to the spheroidal morphology and solitary or loosely aggregated habit (Greek *aphetos* = free, loose).

Discussion. Aphetospora is proposed as a form genus to include all solitary and loosely aggregated spheroids and ellipsoids in the lower Yudomian assemblage. The spheroids and ellipsoids so lumped together are characterized by a lack of distinct colonial organization and cannot be confidently assigned to any Yudomian taxon consisting of spheroids and ellipsoids arranged in distinctive clusters of colonial form.

Considering the wide size distribution shown in the histogram of Fig. 17, it is likely that the genus *Aphetospora* includes biologically diverse taxa. Some cell-like objects here referred to *Aphetospora* may represent loose cells of colonial taxa. Because of the simple procaryotic morphology, however, it is difficult to assign them to other taxa where they are not closely associated with colonial populations.

Both smooth specimens with apparently solid walls (Plate III, 12) and granular specimens with interrupted walls (Plate III, 10,11) are included in the same genus *Aphetospora*, that variation being interpreted as a product of diagenetic or degradational processes.

Comparison. Referred to the relatively simple morphology and the small size of the spheroidal and ellipsoidal nannofossils, the genus *Aphetospora* is characteristically procaryotic and chroococcacean.

Among fossil records, the morphology and size range of *Aphetospora* spheroids and ellipsoids is similar to that of an older form-genus, *Huroniospora* Barghoorn, from cherts of the Gunflint Iron Formation. However, the minute aperture sometimes exhibited at the more constricted end of *Huroniospora* has not been observed in *Aphetospora*. Some members of *Aphetospora* occasionally connect in uniseriate aggregates or loosely attached groups whereas *Huroniospora* consists exclusively of unattached bodies.

These specimens of *Aphetospora* connected in uniseriate aggregates two to three cell-like units long (Plate III, 12) are comparable to chained specimens of *Myxococcoides inornata* Schopf, described from cherts of the Bitter Springs Formation (Schopf, 1968), and the Belcher Islands Group (Hofmann, 1976). The *Myxococcoides inornata* specimens from the Bitter Springs and the Belcher Islands assemblages are distinguished from chained specimens of *Aphetospora*, however, by their occasional colonial habit and the appearance of amorphous organic matrix encompassing the chained specimens.