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ABSTRACTS OF PAPERS

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COPROLITES *versus* FECAL PELLETS

Since the earliest descriptions by Lister (1678), animal fecal excrements have aroused the interest of scientists. Fossilized specimens, thought at one time to be fossil fir cones, gained special recognition following the first suggestion of their animal origin by Mantell (1822) and the coining of the term "coprolites" by Buckland (1829). Special recognition came about because coprolites provide data pertaining to the diet, the physiological nature of certain internal organs, and the ecological environment of the animals that deliver them.

A literature review of more than 400 publications on the subject has been prepared (Häntzschel, El-Baz, and Amstutz, in press). A study of the terminology applied in these reports indicates a lack of consistency. In matters of nomenclature, there are strong criteria which support the following:

1. The term "coprolites" is used correctly when reference is made to petrified fecal excrements. It is used incorrectly when it refers to desiccated, dried, or fresh fecal remains.
2. Coprolites should be restricted to fossilized fecal remains of vertebrates (between 1 mm and 20 cm). Invertebrate fecal remains (usually smaller than 1 mm) may be called fecal pellets, and where petrified, fossil fecal pellets.
3. Accumulation of petrified fecal excrements of birds may be referred to as guano deposit or fossil guano.
4. Coprolites and fossil fecal pellets should be used to describe specimens which are *known* to have originated as animal fecal excrements. Those concretionary fossil forms showing partial geometric or chemical similarity to them should be termed "pseudo-coprolites" and "pseudo-fossil fecal pellets," respectively.

Statistical studies of published information concerning coprolites, fossil fecal pellets, and related objects (enterolites, urolites, vomit balls, gastric concretions, vesinal and urinary calculi, etc.) proved to be rewarding. It was feasible to classify coprolites and fossil fecal pellets according to shape, size, color, and composition. Statistical counts of the distribution, animal of origin, enclosing sediments, and geologic age of known occurrences also were carried out.