

PRECAMBRIAN FOSSIL OCCURRENCES IN NORTH AMERICA:
AN OVERVIEW AND APPRAISAL OF THE DATA

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Fossils and possible fossils have been reported from Canada, Greenland, U.S.A., and Mexico from at least 379 formations attributed to the Precambrian (Fig. 1); many important discoveries were made only in the last 15 years. The occurrences known to the end of 1994 have been compiled for a forthcoming volume in the Decade of North American Geology (DNAG) series (Hofmann, in press); their distributions by type and age are shown on separate maps, and by histograms with 100-m.y. bins. The stratigraphic distribution is polymodal, each major Precambrian era with its own prominent peak; 39 units are Archean, 3 Archean or Proterozoic, 319 Proterozoic, and 14 are Proterozoic or Cambrian (Fig. 2).

The most common Precambrian remains are stromatolites (in 209 formations) followed by chemofossils (120 formations), microfossils (96 formations), carbonaceous megafossils (24 formations), body fossils of Ediacaran aspect (18 formations), and metazoan trace fossils (14 formations). Oncoliths and catagraphs are known from 24 and 6 formations, respectively. Large numbers of units also contain dubiofossils (74) that await restudy, and pseudofossils (34). The observed distributions track both biological evolution and the development of the North American craton; they also are partly related to factors such as the amount of research activity devoted to particular regions and intervals, the detail of stratigraphic detail known in given areas, and the types of fossils recognized in the field or selected for study. The inventory can assist in the testing of current hypotheses and in identifying topics and strategies for future work.

HOFMANN, H.J. (in press). Synopsis of Precambrian fossil occurrences in North America. Part 2. *In*: W.C. Morgan (ed.), *Precambrian Geology of the Craton in Canada and Greenland*. Geological Survey of Canada, *Geology of Canada*, no. 7. (The *Geology of North America*, v. C-1. Geological Society of America, Boulder, Colorado).

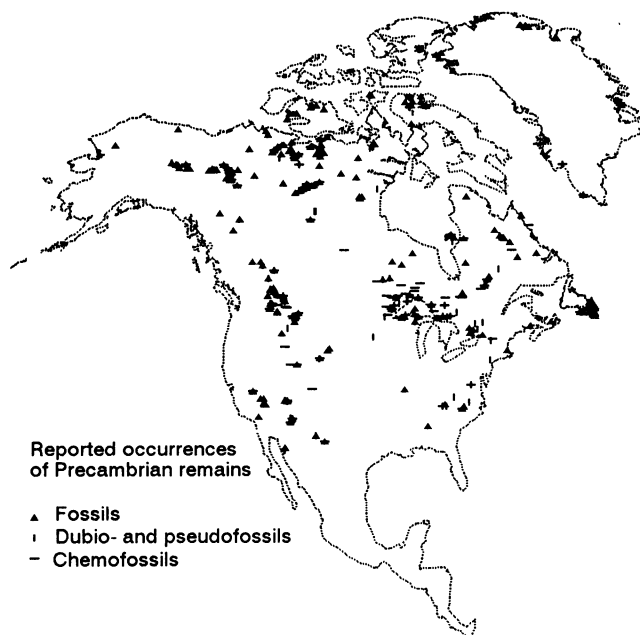


Figure 1

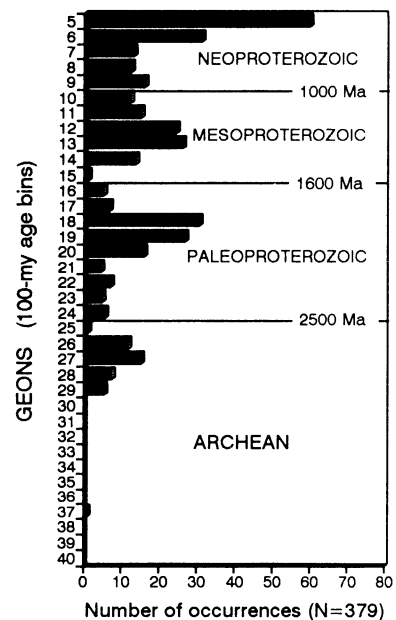


Figure 2