

Fig. 1-1. Global Precambrian sketch-map showing the distribution of exposed and buried (sub-Phanerozoic) Precambrian crust within the conventionally defined continents. Data plotted on National Geographic Society base-map 'The World', National Geographic Magazine (Washington, December 1981).

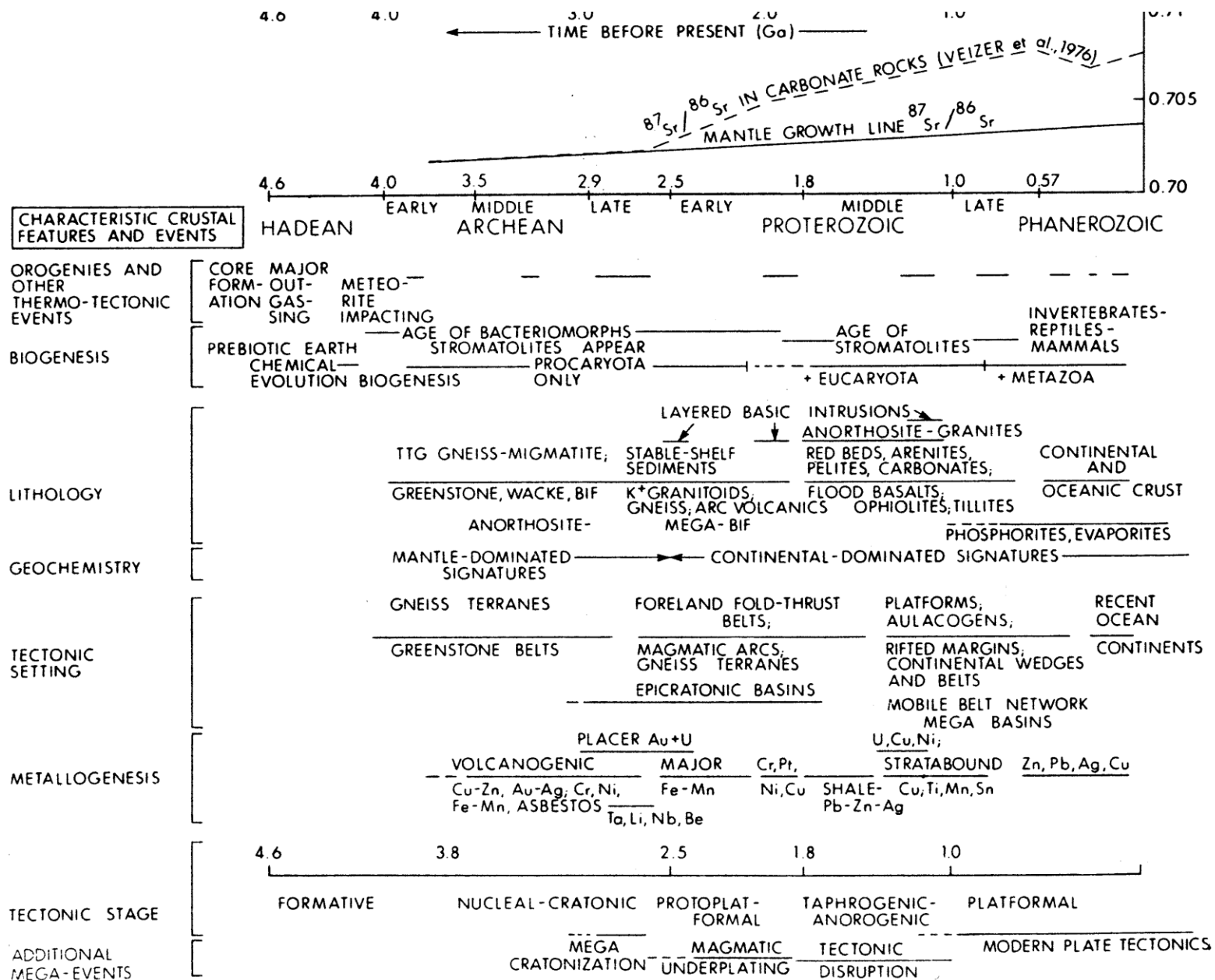
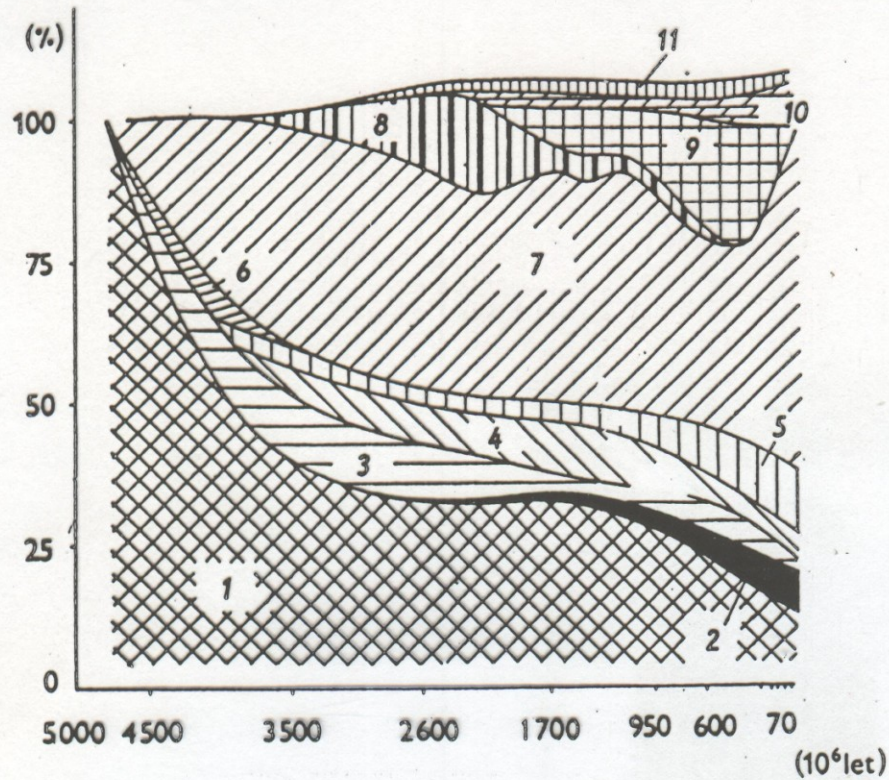
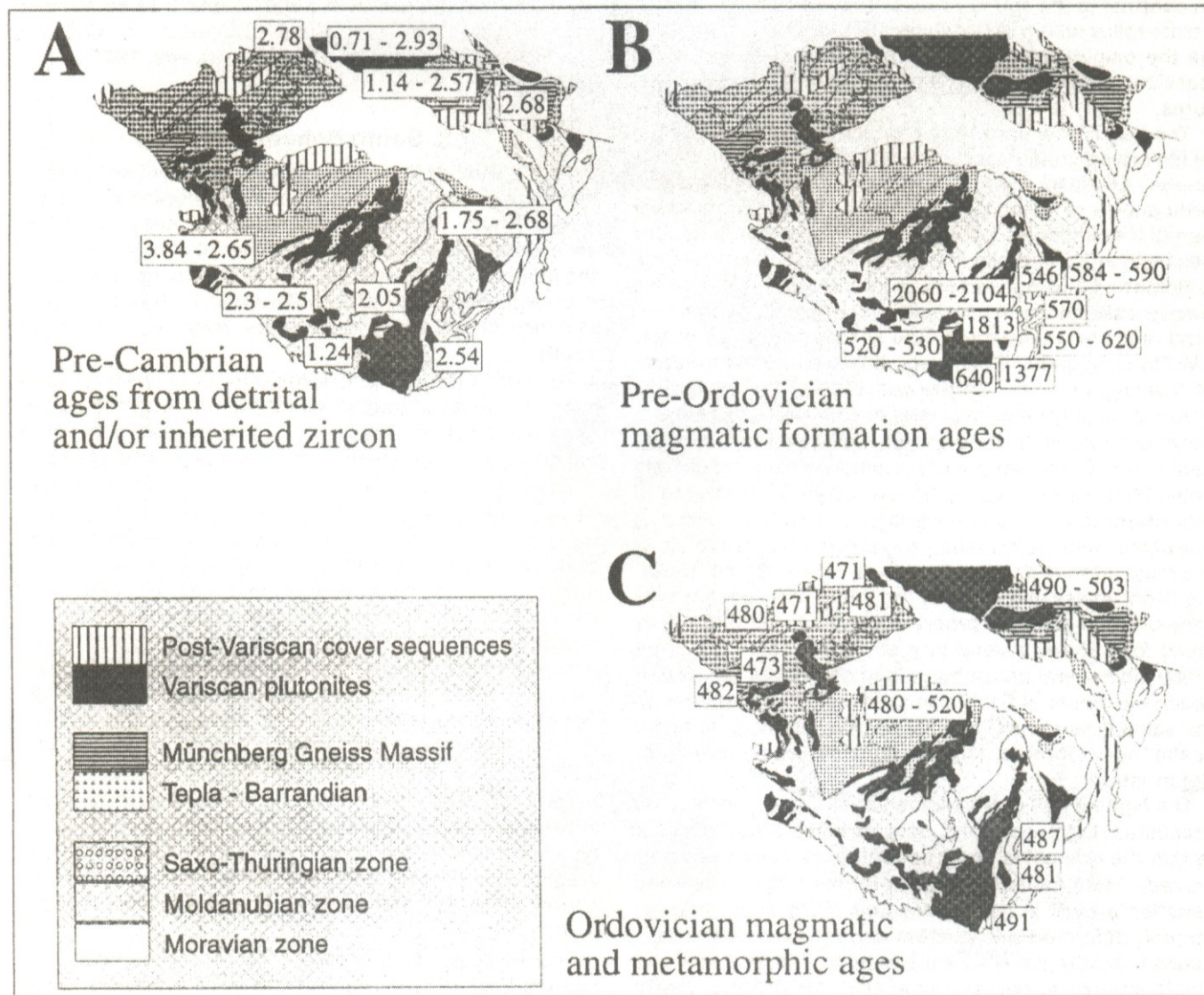


Fig. 6-7. Crustal controls and trends in development and preservation of Earth's continental crust, together with characteristic crustal features and events arranged according to fivefold tectonic stages. (Modified after Goodwin 1981b. Fig. 1).



Obr. 41. Vývoj zastoupení různých sedimentárních hornin v geologické historii (podle RONOVA, 1964)

1 – horniny odpovídající bazickým efuzivům, 2 – sialická efuziva, 3 – droby, 4 – arkózy, 5 – křemité pískovce, 6 – sekundární kvarcitty, 7 – pelity a jejich metamorfni ekvivalenty, 8 – jaspility a podobné horniny, 9 – dolomity, 10 – vápence, 11 – evapority



Text-Fig. 3.

Overview of pre-Variscan ages in the Bohemian Massif.

A: Pre-Cambrian ages (in Ga) from detrital and/or inherited zircons from all units of the Bohemian Massif.

B: Pre-Ordovician magmatic formation ages (in Ma) from meta-granitoids.

C: Ordovician magmatic formation and metamorphic ages (in Ma). In the SE Bohemian Massif Ordovician ages are restricted to the Gföhl and granulite unit.

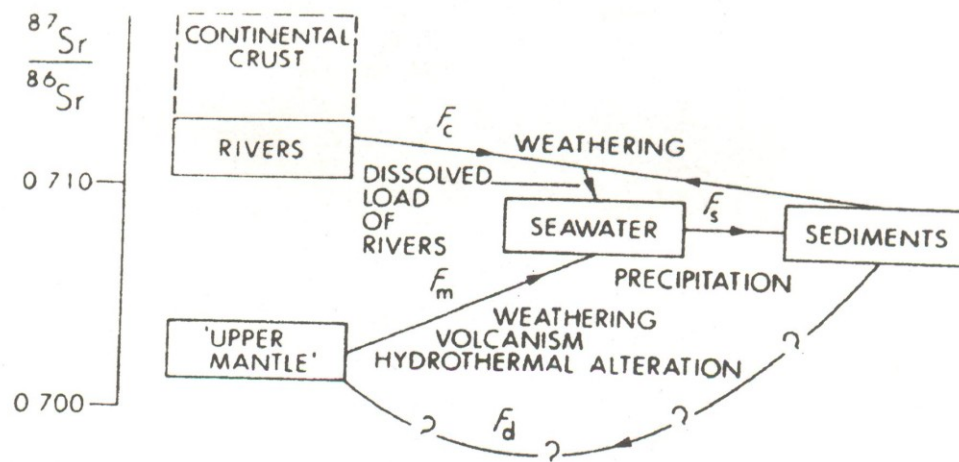


Fig. 6-3. Exogenic cycle of strontium. Present day fluxes controlling the composition of seawater are: (1) continental river discharge (F_c); (2) seawater–ocean basalt interaction ('mantle flux') (F_m); (3) efflux and interaction with sediments (F_s); (4) possible subduction of sediments (F_d). (From Veizer 1984, Fig. 1, and reproduced with permission of the author.)

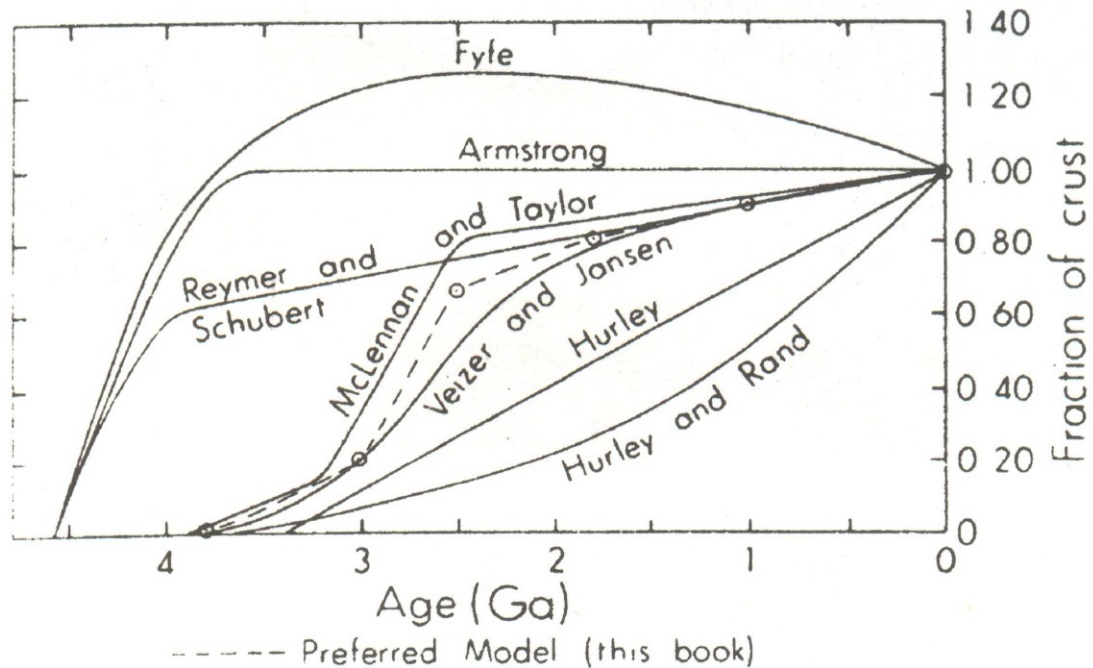


Fig. 6-2. A selection of crustal growth models, (from Taylor and McLennan 1985, Fig. 10.1, and reproduced with permission of the authors), to which has been added the preferred crustal growth model as used in this book.

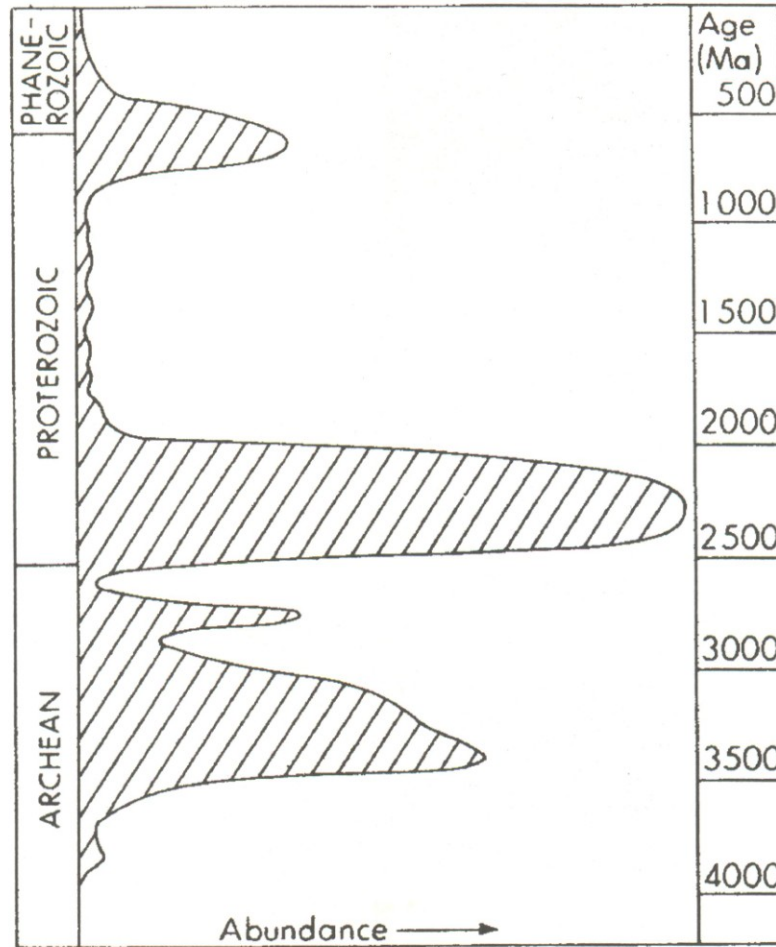


Fig. 6-5. Estimated abundance of iron formation deposited through geologic time. Horizontal scale is non-linear, approximately logarithmic: range 0– 10^{15} t. (From James 1983, Fig. 12-1, and reproduced with permission of the author.)

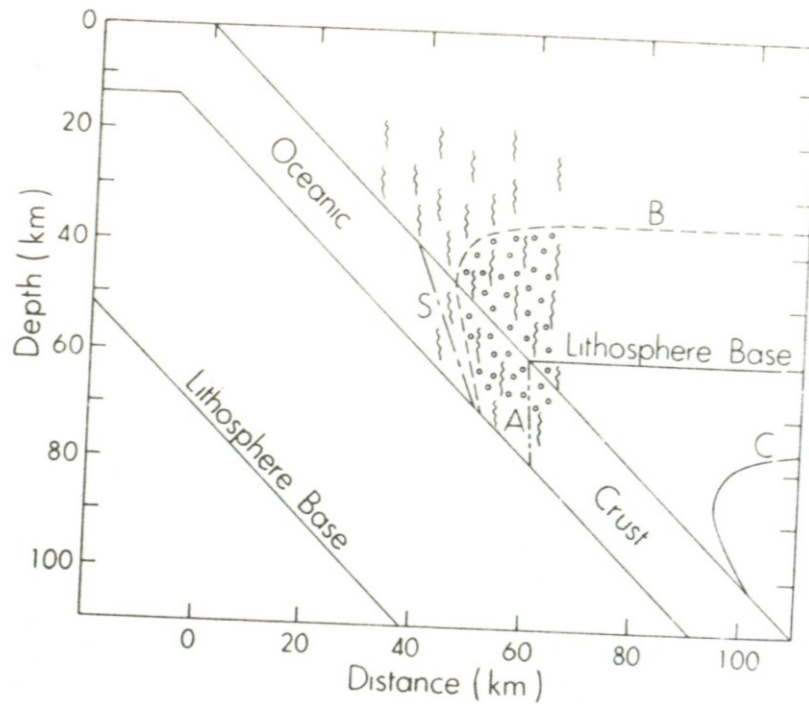


Fig. 6-1. Idealized cross-section of descending Archean oceanic crust, showing the major site of tonalite production: S - serpentine dehydration reaction; A - amphibole-eclogite transition; B - hydrous basalt solidus; C - hydrous-herzolite solidus. Modified from Wyllie (1979) for an Archean upper mantle 150°C hotter than at present. Curly lines denote water from dehydration of descending slab; stippled pattern shows major sites of tonalite production. (From Condie 1986b, Fig. 2, and reproduced with permission of the author.)

EXC

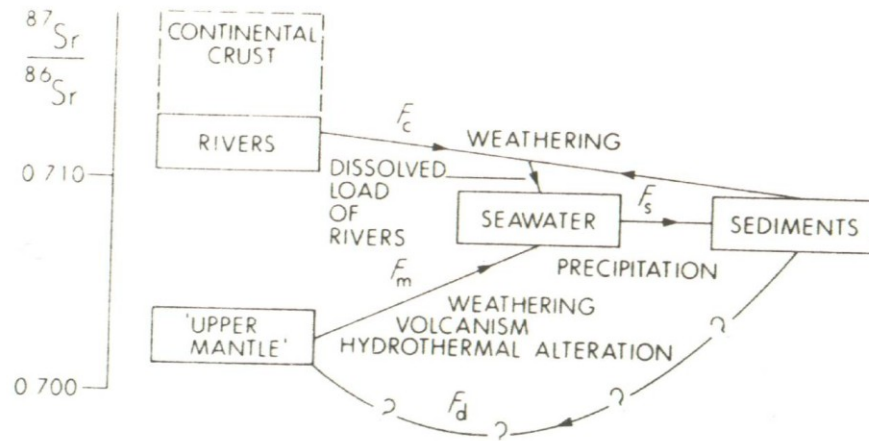


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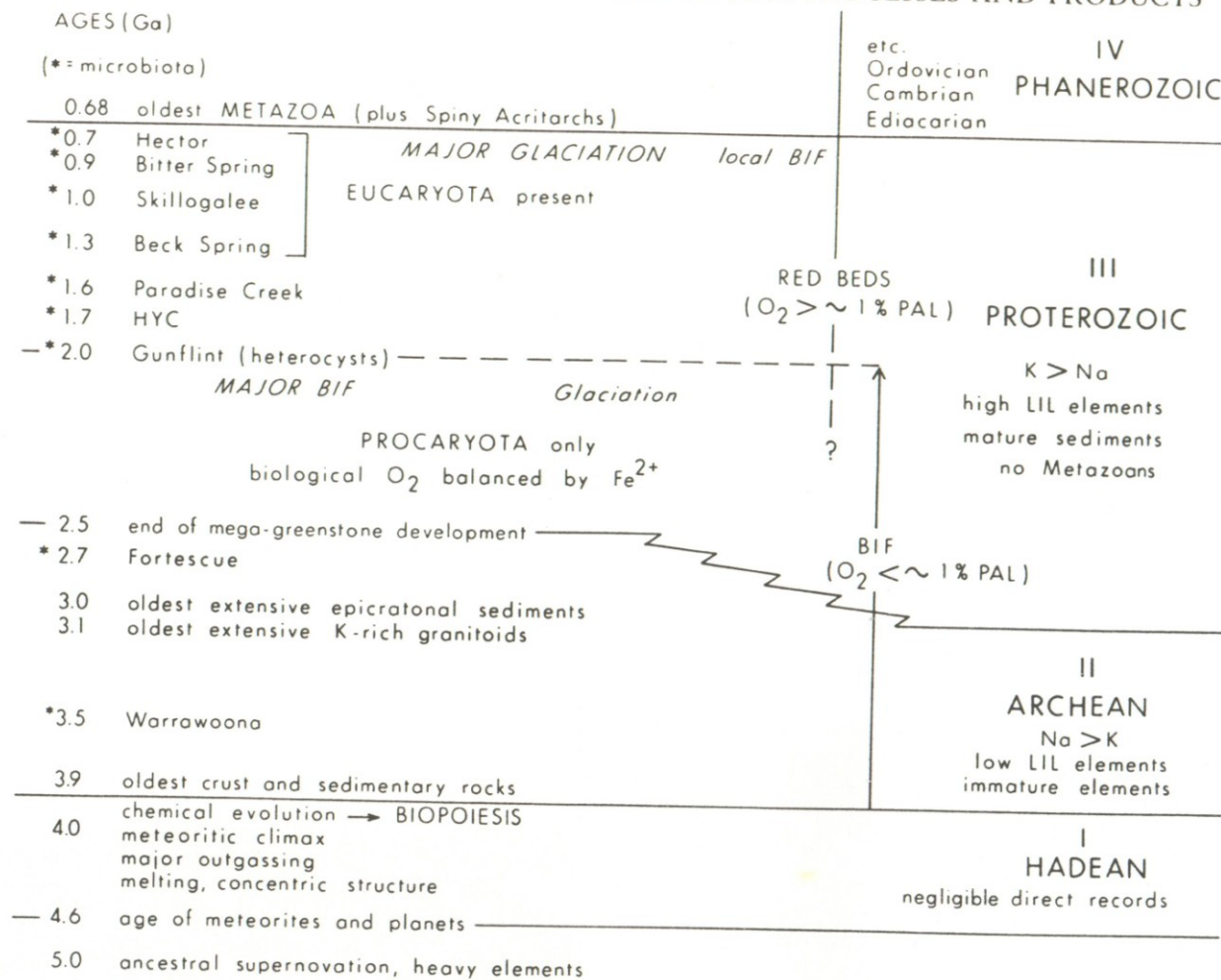


Fig. 6-6. Abbreviated outline of Precambrian history with biostratigraphic emphasis. (Slightly modified from Cloud 1983a, Fig. 1, and reproduced with permission of the author.)

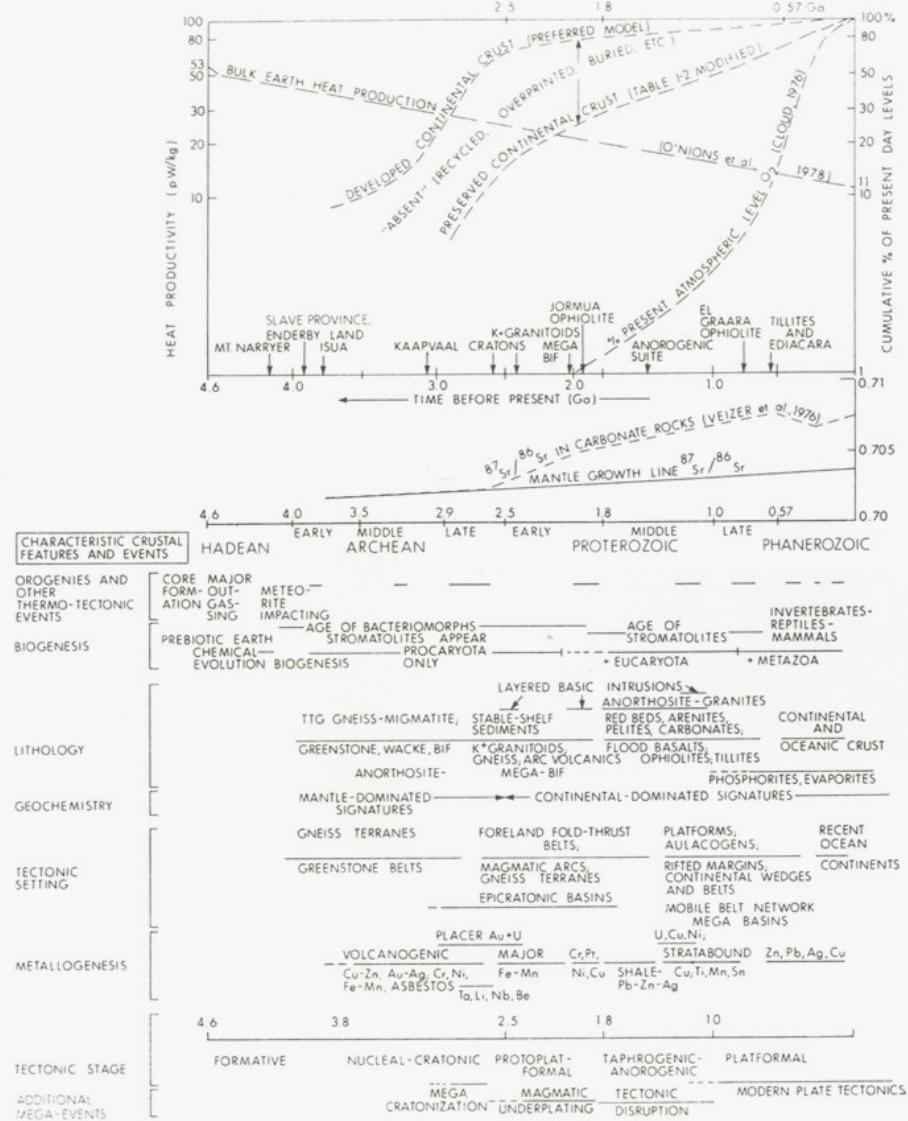


Fig. 6-7. Crustal controls and trends in development and preservation of Earth's continental crust, together with characteristic crustal features and events arranged according to fivefold tectonic stages. (Modified after Goodwin 1981b, Fig. 1).

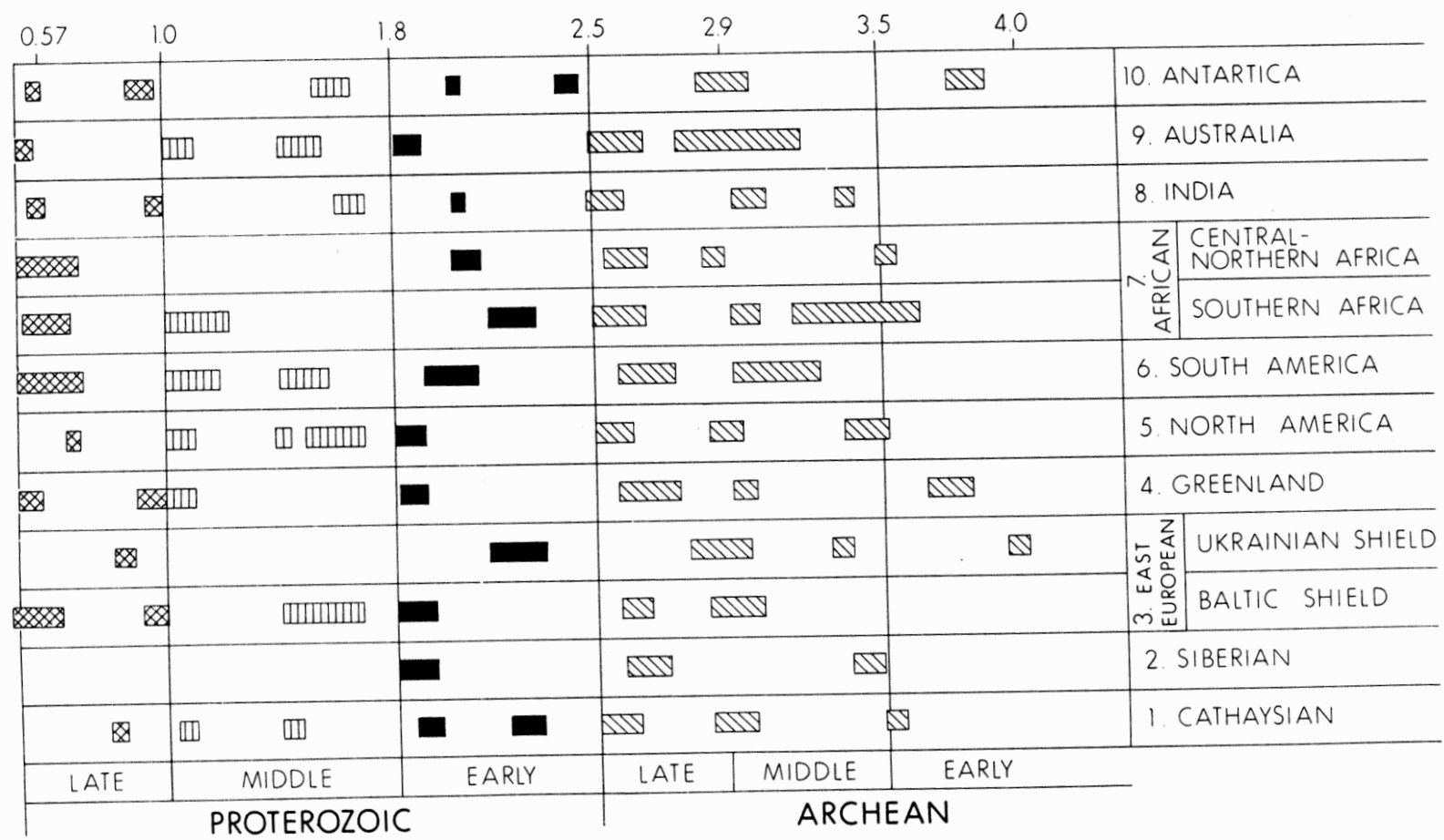


Fig. 1-4. Summary tectonic development of the nine Precambrian cratons and the resulting Precambrian classification scheme followed in this book. Earlier Archean subdivisions are tentative due to the paucity of critical geochronologic data.

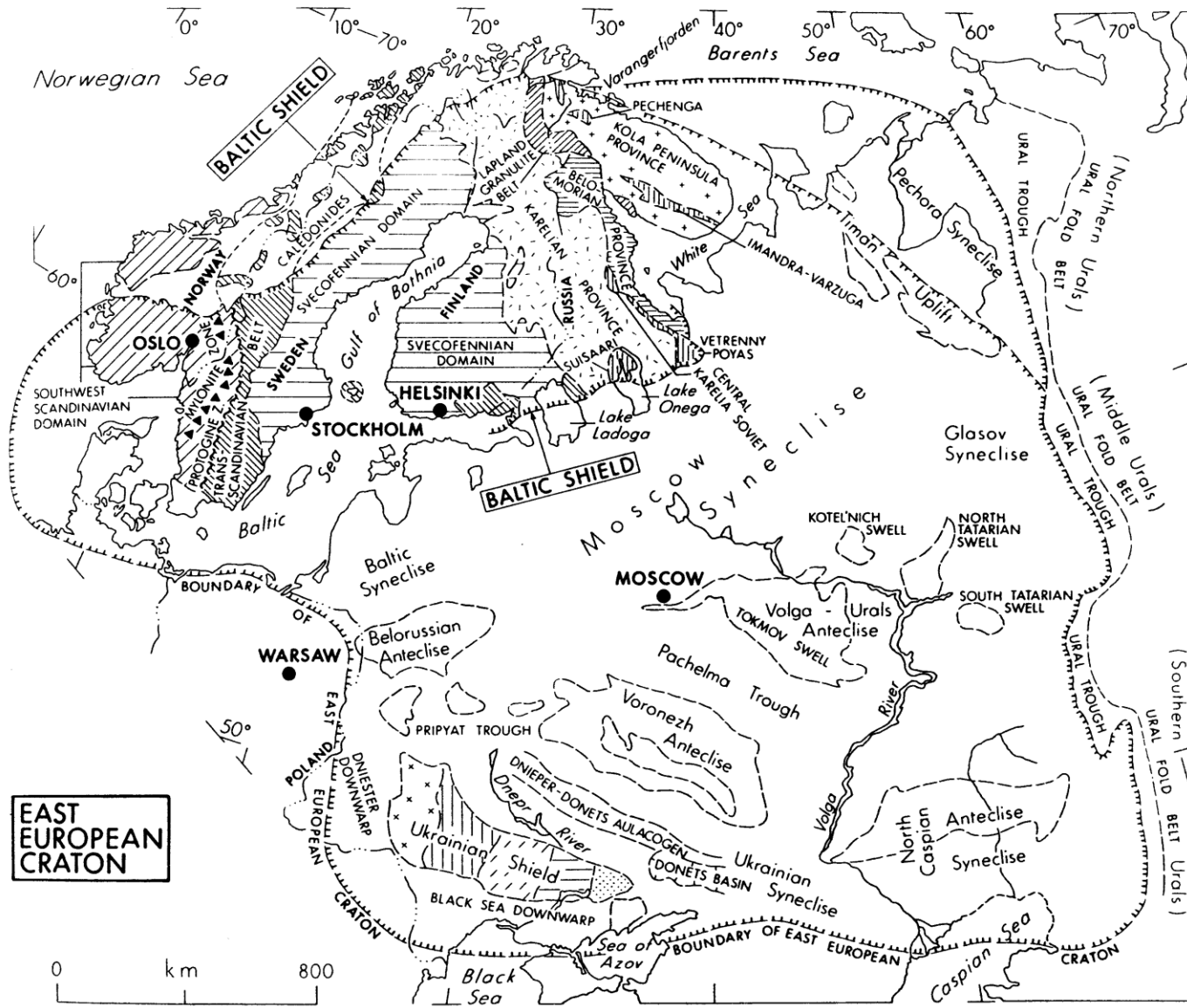


Fig. 1-5c(i). Main geologic outline and divisions of the East European Craton—Main craton divisions, Baltic Shield subdivisions, and Uralian inliers (based on Khain 1985, Fig. 2, Gaál and Gorbatshev 1987, Fig. 2, and Shatzki and Bogdanoff 1959, Fig. 1).

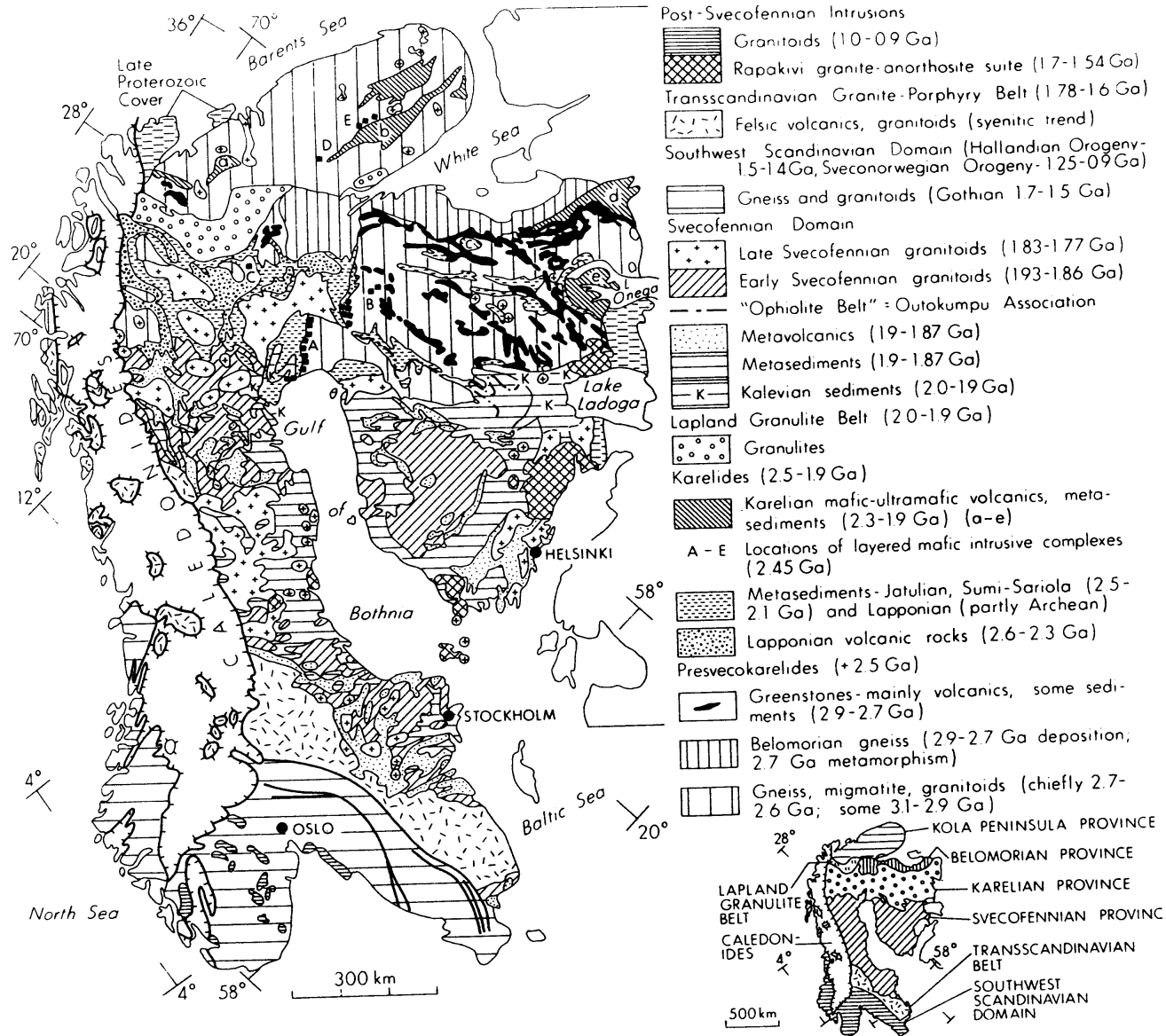


Fig. 2-3. Geologic map of Fennoscandia and adjacent parts of Russia showing the distribution of Precambrian lithologies by province, belt and domain in the Baltic Shield. A - Kemi, B - Koillismaa, C - Koitelainen, D - Monchegorsk, E - Fedorova and Pana fells; a - Pechenga, b - Imandra-Varzuga, c - Central Soviet Karelia, d - Vetienny Poyas, e - Suisaari. (From Gaál and Gorbatshev 1987, Figs. 1.2, and reproduced with permission of the authors).

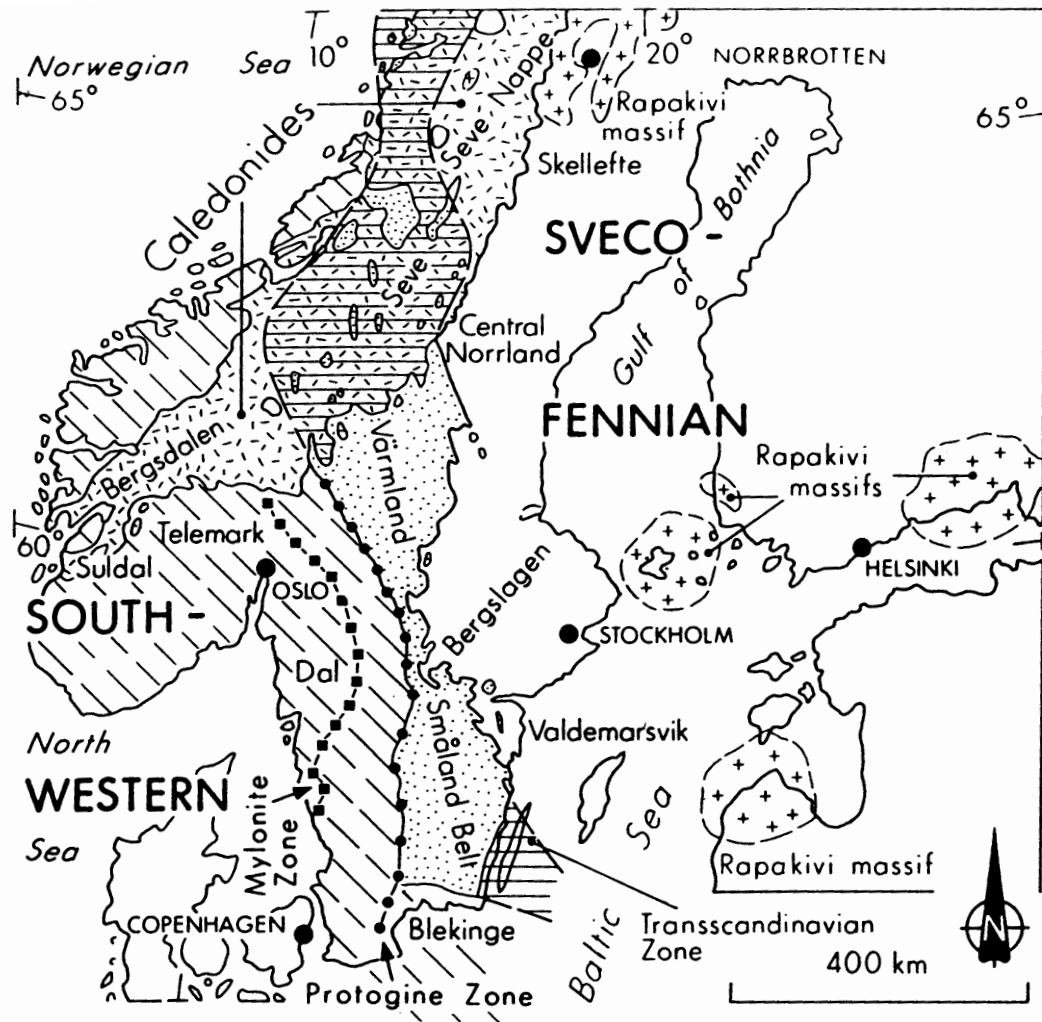


Fig. 4-4. The fundamental subdivisions of Precambrian crust in southern and central Scandinavia. The northern extension of the Varmland-Smaland Belt beneath the Caledonides is shown by stippled-hatched patterns. The Jotnian sandstone-dolerite cover has been omitted. Heavy dotting shows segregated granite massifs formed between 1700 and 1500 Ma. Additional rapakivi massifs may occur in the northern Baltic Sea. The Mylonite Zone and the Protogine Zone are the two largest fault zones in Southern Sweden. (From Gorbatshev 1980, Fig. 1, and reproduced with permission of the author).

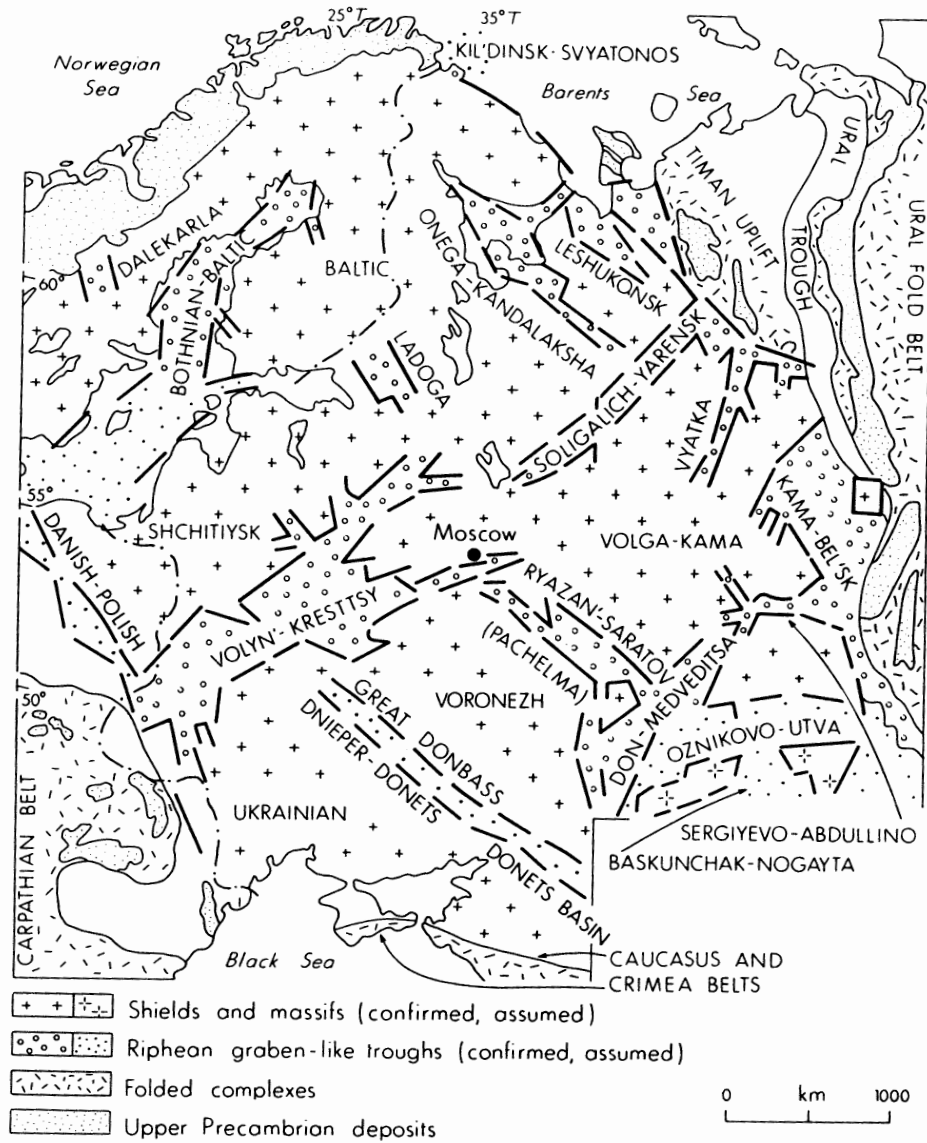


Fig. 4-5. Riphean structures of the East European Craton illustrating the distribution of the graben-like troughs (aulacogens) and intervening shields and massifs. (From Aksenov et al 1978, Fig. 1, and reproduced with permission of the authors).

DISTRIBUTION AND TECTONIC SETTING OF PRECAMBRIAN CRUST

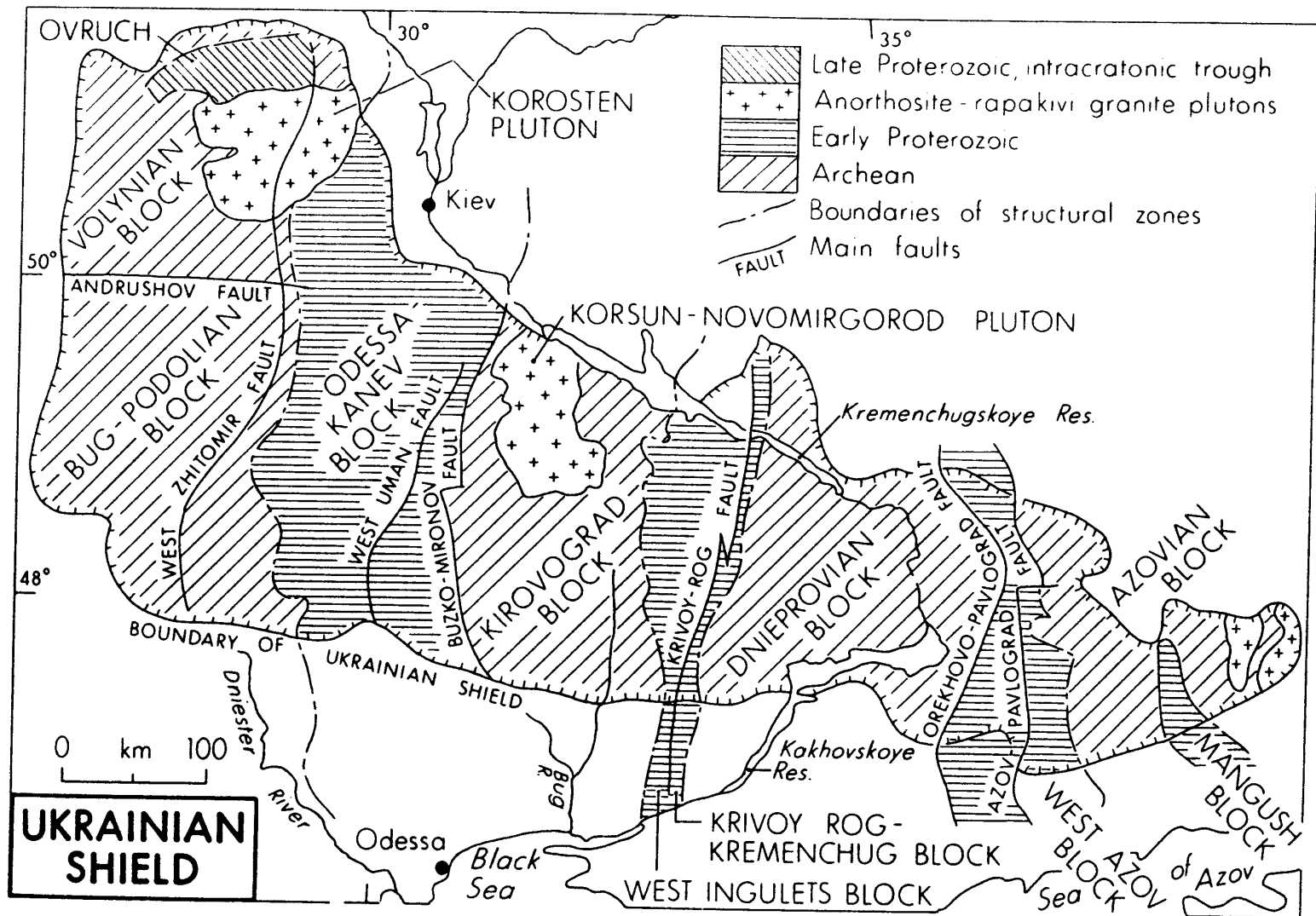


Fig. 1-5c(ii). Main geologic outline and divisions of East European Craton—Ukrainian Shield subdivisions (from Khain 1985, Fig. 6 and published with permission of the author).

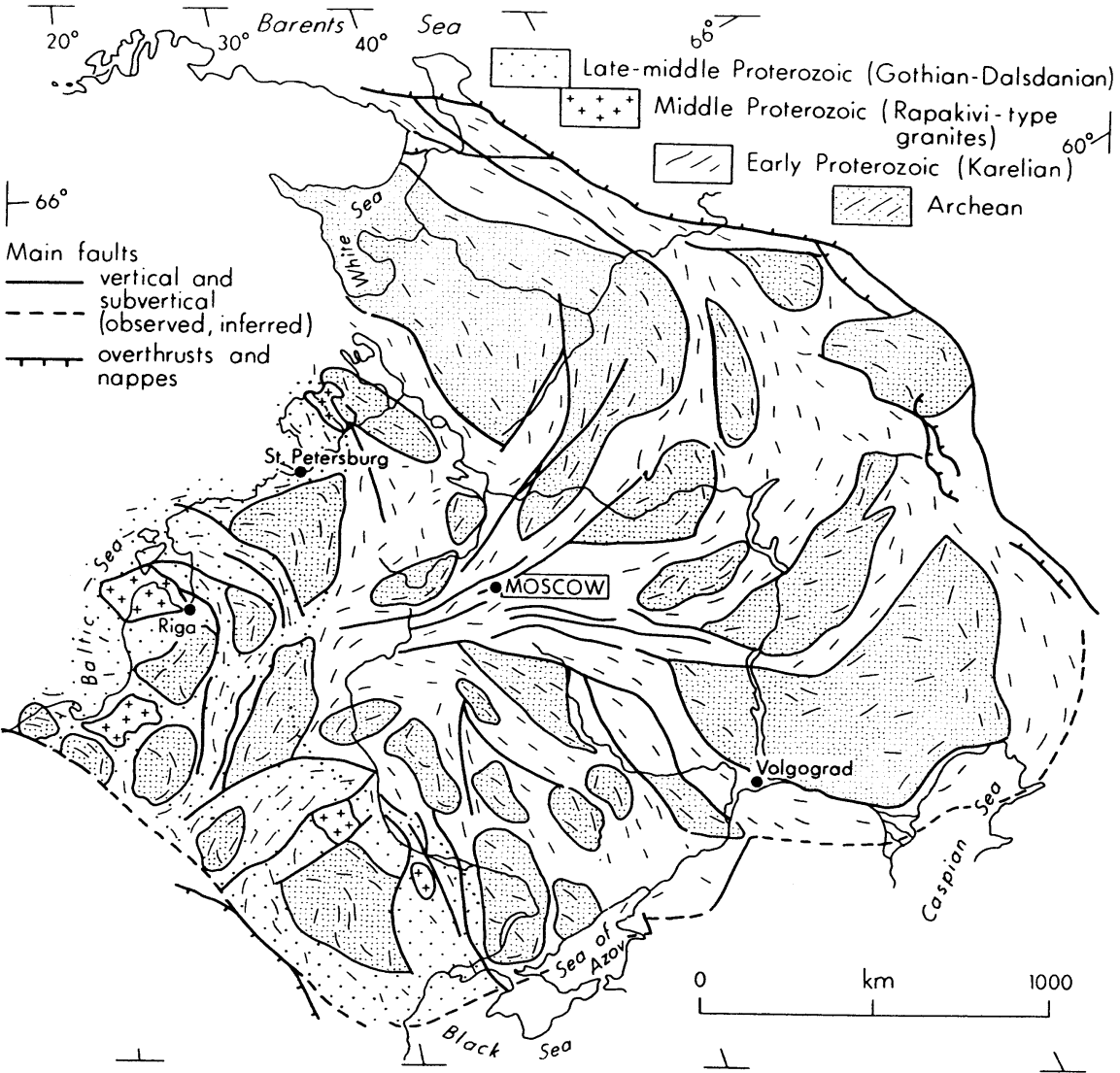


Fig. 1-5c(iii). Main geologic outline and divisions of East European Craton—Interior basement geology beneath the platform cover (based on Khain 1985, Fig. 8).

DISTRIBUTION AND TECTONIC SETTING OF PRECAMBRIAN CRUST

EAST EUROPEAN CRATON

(1) BALTIC SHIELD + *MEDIAN MASSIFS OUTSIDE THE CRATON (Excluding Scottish Shield Fragment)*

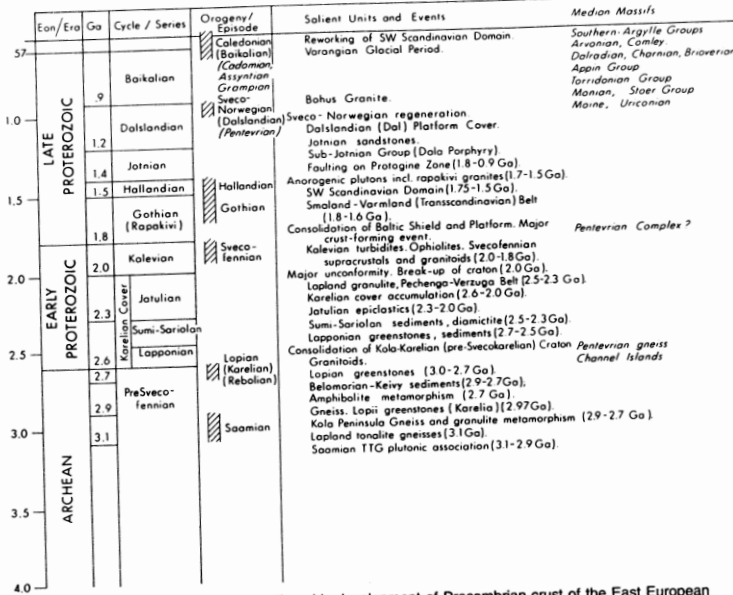


Fig. 1-3c(i). Summary chrono-stratigraphic development of Precambrian crust of the East European Craton—Baltic Shield and median massifs outside the craton. Salient crustal units and events are arranged in relation to internal orogenies and resulting tectonic cycles.

EAST EUROPEAN CRATON

(2) UKRAINIAN SHIELD AND INTERIOR CRATON

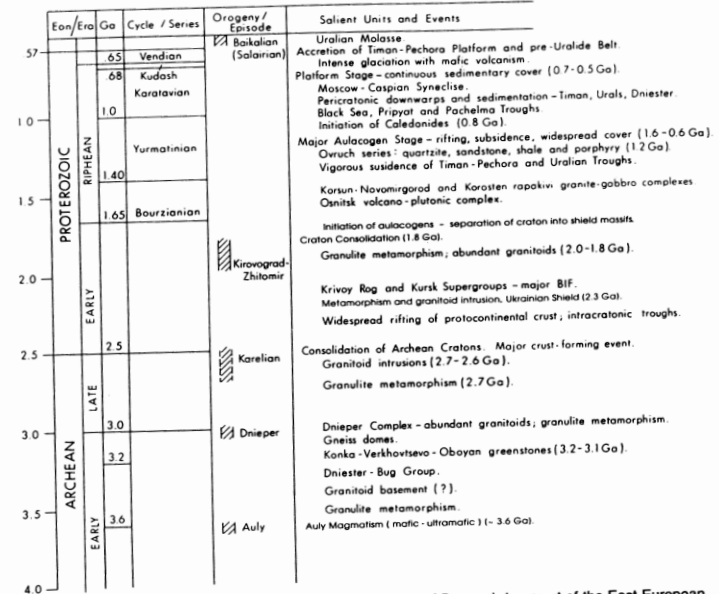


Fig. 1-3c(ii). Summary chrono-stratigraphic development of Precambrian crust of the East European Craton—Ukrainian Shield and interior platform. Salient crustal units and events are arranged in relation to internal orogenies and resulting tectonic cycles.

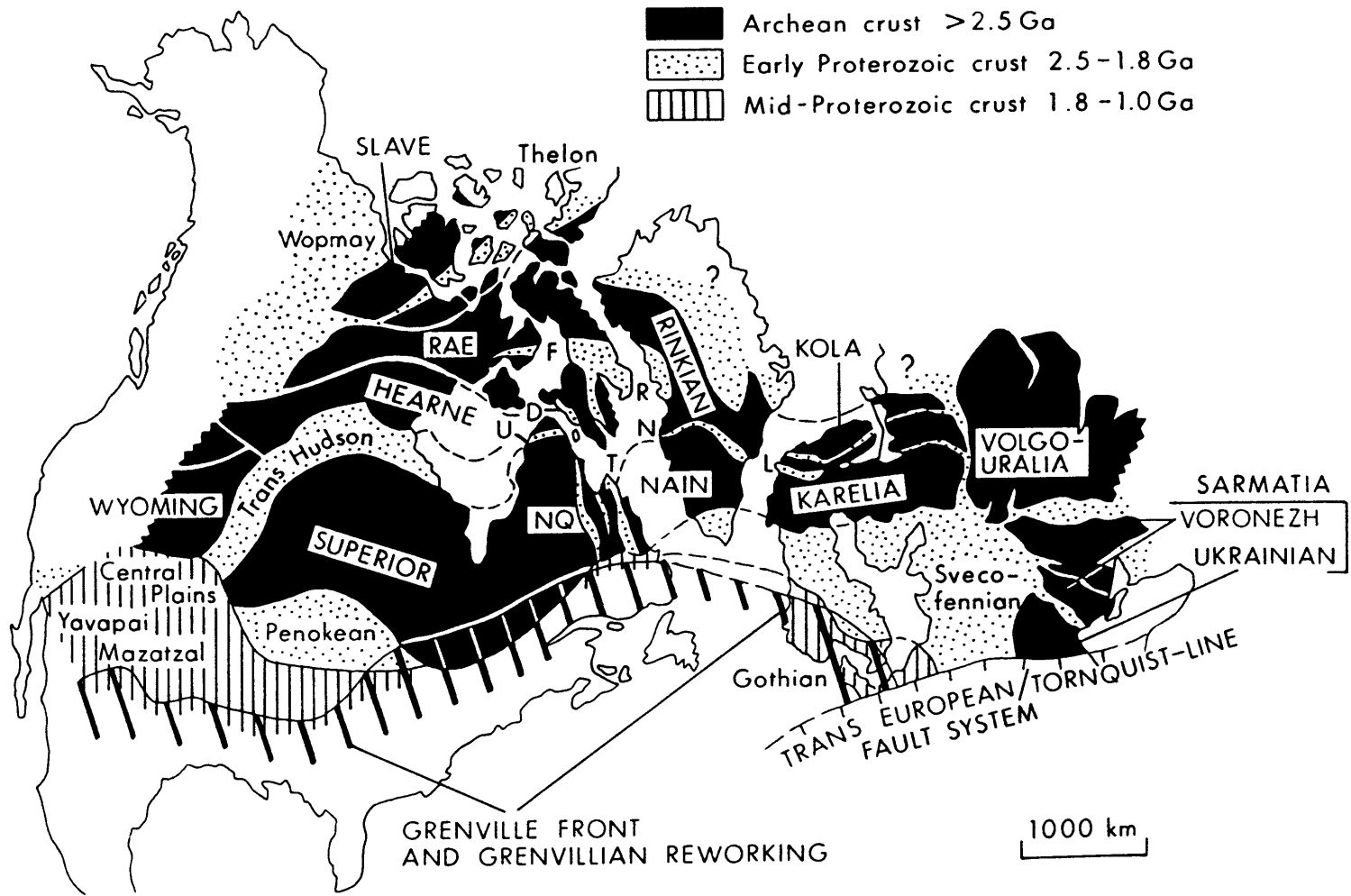


Fig. 3-2. North Atlantic Precambrian reconstruction showing pre-Grenvillian craton configurations as discussed in the text (after Gorbatshev and Bogdanova, 1993, Fig. 4). The letter symbols are: NQ – New Quebec; U – Ungava; D – Dorset; F – foxe; R – Rinkian; N – Nugsugtoqidian; T – Torngat; L – Lapland Granulite Belt.