

Stratigraphy and Palaeontology of the Holm Dal Formation (late Middle Cambrian), central North Greenland

edited by

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The Holm Dal Formation of central North Greenland is formally proposed and its depositional history elucidated. A rich fauna of trilobites, brachiopods and molluscs, and a single association of trace fossils are described. The relationship between trilobite distribution and lithofacies is analysed.

The trilobite fauna is dominated by polymeroids that are most characteristic of the lower and middle *Cedaria* Zone (early Dresbachian) as widely applied in North America. Agnostoid species are characteristic of the upper *Lejopyge laevigata* Interval-zone, indicating a late Middle Cambrian age by correlation with the Swedish standard for north-western Europe. Twenty four of the 58 species of trilobites are new, as are 9 of the 34 genera.

Fourteen species of inarticulate brachiopods are referred to 11 genera; three species are new. One new genus and 5 new species are described among 13 species of molluscs; a new ichnospecies of the arthropod trackway *Multipodichnus* is described.

Frontispiece

View looking north along Gustav Holm Dal, across Perssuaq Gletscher (centre), J. P. Koch Fjord (left) and northern Peary Land, toward the Arctic Ocean. Cambrian – Silurian shelf sediments in the foreground and along the far side of Perssuaq Gletscher are succeeded to the north by deep-water trough sediments of similar age (islands in J. P. Koch Fjord and beyond) forming the fold belt of North Greenland. Upper Middle Cambrian strata assigned to the Holm Dal Formation outcrop on both sides of Gustav Holm Dal south of Perssuaq Gletscher (Photo: Geodetic Institute, Copenhagen).

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