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Palaeobiogeography and migration in the Late Cretaceous belemnite family Belemnitellida

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The Late Cretaceous belemnite family Belemnitellidae Pavlow, 1914, which includes nine genera and two subgenera, occurs only in the Northern Hemisphere, that is in the North European and North American palaeobiogeographical Provinces of the North Temperate Realm, in addition to the northern margin of the Tethyan Realm in Europe. The North European Province is subdivided into the Central European, Central Russian and Baltoscandian Subprovinces. The centre of origin and dispersal of the belemnitellids lay in the North European Province and all known genera and subgenera occur there. The belemnitellids immigrated intermittently into the Tethyan Realm (at least nine times) and the North American Province (at least six times). The majority of the species occurring in the Tethyan Realm are conspecific with those from the North European Province, whereas the species occurring in the North American Province are endemic, with a few exceptions. The endemic species probably evolved by allopatric speciation from initial migrants. More than a score migrations have been recognized within the subprovinces of the North European Province. The palaeo-geographical distribution and migration patterns of the belemnitellids were to a certain extent controlled by eustatic sea-level changes, cool or warm climatic phases and competition, although the cause of several migration events cannot be satisfactorily explained at present.

Key words: Belemnitellidae, Late Cretaceous, palaeobiogeography, migration, Northern Hemisphere.

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