Record Nr. UNINA9910298429903321 Autore Hao Qian Titolo The LGM Distribution of Dominant Tree Genera in Northern China's Forest-steppe Ecotone and Their Postglacial Migration [[electronic resource] /] / by Qian Hao Singapore:,: Springer Singapore:,: Imprint: Springer,, 2018 Pubbl/distr/stampa **ISBN** 981-13-2883-8 Edizione [1st ed. 2018.] Descrizione fisica 1 online resource (115 pages) Collana Springer Theses, Recognizing Outstanding Ph.D. Research, , 2190-5053 574.52642 Disciplina Soggetti Plant Ecology **Ecology** Plant Systematics/Taxonomy/Biogeography **Terrestial Ecology** Environmental Geography Lingua di pubblicazione Inglese Materiale a stampa **Formato** Monografia Livello bibliografico Introduction Chapter -- Research Area and Research Methods Chapter Nota di contenuto -- Glacial refugia and the postglacial migration of dominant tree species in northern China -- Effects of Vertical Migration on Local Vegetation Chapter -- Local Vegetation Dynamics and Forest Advance Retreat -- Forest migration model and uncertainties Chapter -- Main Conclusions. This book systematically discusses the vegetation dynamics in northern Sommario/riassunto China since the LGM, with a focus on three dominant tree species (Pinus, Quercus and Betula). By integrating methods of palaeoecology, phylogeography and species distribution model, it reconstructs the glacial refugia in northern China, demonstrating that the species were located further north than previously assumed during the LGM. The postglacial dynamics of forest distribution included not only longdistance north-south migration but also local spread from LGM microrefugia in northern China. On the regional scale, the book shows the altitudinal migration pattern of the three dominant tree genera and the

role of topographical factors in the migration of the forest-steppe

border. On the catchment scale, it analyzes Huangqihai Lake, located in the forest-steppe ecotone in northern China, to indentify the local forest dynamics response to the Holocene climatic change. It shows that local forests have various modes of response to the climate drying, including shrubland expansion, savannification and replacement of steppe. In brief, these studies at different space-time scales illustrate the effects of climate, topography and other factors on forest migration.