

Dutch Younger Dryas Research

Introduction

Short-time climatic fluctuations in the recent geological past have received considerable interest in the past decade. These changes are well documented in terrestrial and marine sections and in ice cores. Understanding the mechanisms behind such short events, their causes, effects and duration, is essential to predict future climate change. Of particular interest is the Younger Dryas (10–11ka BP), the last in a series of rapid changes within the Allerød–Bølling–Dryas complex. The Younger Dryas represents a short but severe glacial interruption during Termination 1, the last deglaciation. Initially the Younger Dryas was studied in terrestrial sequences from western Europe. Subsequent recognition of the Younger Dryas event in deep-sea and ice cores and in terrestrial sequences all over the world has indicated that the event, although most pronounced on the Northern Hemisphere, had a worldwide impact.

On October 29, 1993 the Faculty of Earth Sciences at the Vrije Universiteit Amsterdam hosted a meeting devoted to the Dutch contribution to Younger Dryas research. The meeting was sponsored by the Netherlands Research School of Sedimentary Geology (NSG) and was attended by 90 participants. Target of this meeting was to promote communication between Younger Dryas researchers from the various terrestrial and marine disciplines. In a series of 14 papers the multidisciplinary aspects of the Younger Dryas research were clearly demonstrated.

This Special section presents the extended abstracts of 11 papers delivered during the meeting. The first abstract reviews the historical development of the originally terrestrial Younger Dryas concept (Joosten) and the second its relatively recent record in marine and ice cores (Ganssen). The next contributions are devoted to Younger Dryas research in western Europe. Vandenberghe comments on the prevailing climatic conditions; Kasse ties the response of rivers in the southern Netherlands to the rapid climatic fluctuations. Records from the northern Netherlands are presented by Van der Meulen and Mook. Archaeological implications in the southern Netherlands are discussed by Deeben.

Younger Dryas research from outside western Europe concludes this special section. Mediterranean records, both in terrestrial and marine sequences, are presented by Bottema and by Troelstra & Van Hinte. Palynological evidence from Costa Rica and Indonesia (Islebe et al. and Van der Kaars) is convincing proof of the worldwide character of the Younger Dryas.

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