

PALAEOENVIRONMENTAL CHANGES IN THE MAQUINÉ RIVER VALLEY, RS, BRAZIL, DURING THE HOLOCENE ACCORDING TO PALYNOLOGICAL DATA

MARLENI MARQUES-TOIGO

SVETLANA MEDEANIC

Instituto de Geociências, UFRGS, Av. Bento Gonçalves, 9500, Caixa Postal 15001,
91501-970, Porto Alegre, RS, Brasil. mmtoigo@aol.com, svetlana@if.ufrgs.br

VOLKER MOSBRUGGER

ABDUL RAHMAN ASHRAF

Institute and Museum of Geology and Paleontology, Eberhard-Karls University, Tübingen, Germany.
volker.mosbrugger@uni-tuebingen.de, apias01@uni-tuebingen.de

ABSTRACT – This article presents complementary data of a palynological study of 40 samples from the core B-X, coming from the Maquiné River Valley, State of Rio Grande do Sul, Brazil. The samples include large numbers and a great diversity of pollen, spores of higher plants and algae. On the base of this data, three stages (early, middle and late) of palaeoenvironmental development were distinguished, corroborating previous finds based solely on algal material. These stages are related to events of transgression and regression of the Atlantic Ocean during the Late Holocene.

Key words: Palynology, Holocene, palaeoenvironment, Brazil.

RESUMO – No presente trabalho são apresentados resultados complementares de análises palinológicas efetuadas em 40 amostras provenientes do testemunho de sondagem B-X localizado na área do Vale do Rio Maquiné, Rio Grande do Sul, Brasil. O estudo palinológico revelou a presença de ricas associações de esporos, pólenes e algas. Baseado na relação entre as mudanças na composição destas associações, foram corroborados três distintos estágios anteriormente descritos, denominados de inferior (R1), médio (T) e superior (R), que foram relacionados a processos transgressivos/regressivos do Oceano Atlântico ocorridos durante o Holoceno tardio.

Palavras-chave: Palinologia, Holoceno, paleoambiente, Brasil.

INTRODUCTION

The objective of the palynological analyses of Holocene sediments presented here, is to reconstruct the palaeoenvironment and identify floristic changes during the Late Quaternary of the coastal zone of the Rio Grande do Sul State, Brazil. In this study, a pollen analysis was carried out on samples from the drilling well B-X, situated in the Maquiné River Valley (Figure 1). In this area, numerous drilling-holes have been dug thanks to a joint project of the Universidade Federal do Rio Grande do Sul – UFRGS (Brazil) and Eberhard-Karls Universität Tübingen (Germany) which aims at the use

of pollen data for reconstruction of the Late Quaternary/ Holocene climate and vegetation of southern Brazil. This region is favorable for palynological studies because of the great thickness and wide palaeogeographical distribution of Holocene sediments (Horn Filho *et al.*, 1984). In the Maquiné River Valley they are represented mainly by stratified silty sand, silty clay and clayey silts (Figure 2). This area is also interesting by its position within the area of current distribution of the Araucarian forests, comprising *Araucaria angustifolia* (Berth) O. Ktze., *Podocarpus lamberti* (Klotzsch) Endl., numerous species of Lauraceae (*Ocotea catharinensis* Mez., *Nectandra leucothyrsus*