

AQUA WORKSHOP:

UPDATES ON THE CHRONOLOGY, STRATIGRAPHY AND ENVIRONMENTS OF THE LAST GLACIAL MAXIMUM AND THE LATE GLACIAL ON THE SOUTHERN SIDE OF THE ALPS

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ABSTRACT: The AIQUA workshop, sponsored by the TERPRO and SACCOM INQUA Commissions and by the IGG-CNR and the Department of Geosciences of the University of Padova, was held at the Department of Geosciences of Padova, on June 22nd-23rd, 2017 (scientific and organizing committee: P. Mozzi, G. Monegato, A. Fontana, S. Rossato). The workshop focused on the geomorphic, sedimentary and palaeoenvironmental events that occurred in the southern Alpine region and related Po Plain, Venetian-Friulian Plain and Adriatic basin during the Last Glacial Maximum and the Late Glacial. About 60 participants attended the workshop, with nine solicited talks, five short communications and posters, and ample time devoted to discussion. The second day consisted in a field trip in the Venetian Prealps.

Keywords: Last Glaciation, Last Glacial Maximum, Late Glacial, Alps, Italy

In the last two decades, a number of investigations has brought significant advances in the definition of the stratigraphy and chronology of this crucial portion of the Upper Pleistocene in the Italian Alps and piedmont alluvial basins. The AIQUA workshop, sponsored by the TERPRO and SACCOM INQUA Commissions and by the IGG-CNR and the Department of Geosciences of the University of Padova, was held at the Department of Geosciences of Padova, on June 22nd-23rd, 2017 (scientific and organizing committee: P. Mozzi, G. Monegato, A. Fontana, S. Rossato). It was attended by about 60 participants.

The main aim of the workshop was to provide a comprehensive, state-of-the-art framework of the geomorphic, sedimentary and palaeoenvironmental events that occurred in this key area, which is located at the critical transition between continental Europe and the Mediterranean region. The presence of long-investigated Upper Palaeolithic sites in the Italian sub-Alpine region also rises stimulating questions on the interaction between early humans and extreme environmental conditions and landscapes of the last glaciation. Hot topics discussed during the workshop were:

- the onset, phases and termination of the Alpine LGM
- sediment production and delivery from glacial and periglacial areas to the basin
- piedmont and in-valley terminal glacial tongues
- LGM and Late Glacial climates and environments
- dating methods and integrated chronologies

- territories and settlements of the Upper Paleolithic hunter-gatherers.

The workshop was articulated in a first day of solicited talks, which embraced some major issues on the last glaciation in the Italian side of the Alps: the Alpine glacial systems (G. Monegato) and related megafans (A. Fontana, P. Mozzi, S. Rossato), the Po River lowstand wedge (C. Pellegrini, A. Asioli, K.M. Boahcs, T.M. Drexler, M.L. Sweet, V. Maselli, M. Rovere, T. Tesi, F. Gamberi, G. Dalla Valle, F. Trincardi), the LGM and Lateglacial stadials in the



Fig. 1 - Participants of the AIQUA field trip on the terminal moraines of the Piave glacier at Quero (photo by F. Finocchiaro).

Maritime Alps (A. Ribolini M. Spagnolo, P.R. Federici), the speleothen record in the Eastern Italian Alps (A. Borsato, R. Belli, S. Frisia, J. Hellstrom), ecosystems and environments (C. Ravazzi, R. Pini, F. Vallè), loess deposition in the Po Plain (A. Zerboni, M. Cremaschi), Paleolithic settlements between the Apennines and the Prealps (M. Peresani), and rock glacier evolution in the Alps (R. Colucci, M. Guglielmin). Time was also devoted to short presentations and posters by the participants, concerning glacialigenic landforms and deposits in the Ivrea end-moraine system (Gianotti et al.), Slovenian Alps (Žebre et al.) and Julian Alps (Finocchiaro et al.), as well as loess in the Ligurian Alps (Rellini et al.) and a review of the Mammuthus-Coelodonta Faunal Complex in Italy during the last glaciation (Menicozzi et al.). At the end of the presentations, it followed a plenary discussion on the timing of landscape evolution and palaeoecosystems from the Adriatic plain to the Alps during the Last Glacial Maximum and the Late Glacial

On the second day there was a field trip in the Venetian Prealps, led by P. Mozzi, G. Monegato and S. Rossato. This excursion was centered on glacier arrival, acme and decay in the terminal tracts of the Brenta and Piave valleys, and the related dynamic response of the glaciofluvial system. The first stop concerned the Piave River terraces around Biadene, then we moved to Quero, where we visited the LGM end-moraine system of the Piave glacier. After lunch, we visited the Arsiè-Cismon area, where we observed the moraines of the Brenta glacier and related glaciofluvial deposits.



Fig. 2 - View on the terminal tract of the Piave valley from the LGM terminal moraines of Quero (photo by S. Rossato).



Fig. 3 - Upper Pleistocene fluvial deposits of the Piave River in the Montebelluna megafan (Caravaggio gravel pit) (photo P. Mozzi).



Fig. 4 - Polygenetic LGM glaciofluvial deposits of the Brenta River in the Valsugana valley (Cismon del Grappa) (photo P. Mozzi).