



Closing Conference
November 4th-5th, 2015
Lyon, France

**musée des
confluences**



*Millet cultivation in the Caucasus
from the 6th to the 2nd mill BC:
Origin and development*

The first millet occurrences are dated to ca. 8000 cal. BC in China. According to some scholars, common millet might have been domesticated independently in this area, and later spread to Russia, India, the Middle East and Europe. The question of its diffusion in western Eurasia is still widely debated. In the central Eurasian steppe region, the earliest direct evidence of millet dates from 2400 to 2000 cal. BC. From the Ukraine to central Europe, recent radiocarbon dates directly carried out on millet grains recovered from sites revealed that these were of Bronze and Iron Age, dating to between 1500 and 500 cal. BC.

The sparse existing data in the Caucasus region, however, attests to the presence of this cereal at different Neolithic sites in Georgia and Azerbaijan. Unfortunately, these data must be considered cautiously because the remains assigned to millet have never been directly dated. Furthermore, we do not have quantitative data and their origin may sometimes be vague.

Over the course of the three years of the ORIMIL Project, we have investigated the question of the presence and diffusion of millet in the Caucasus. Focusing on biological archives and archaeological records dating from the Neolithic to the Iron Age, our project aimed at verifying (i) the presence of millet thanks to macro/micro botanical remains, the use of macrolithic tools and new ¹⁴C dates, as well as (ii) its consumption by animals and humans by means of analysing the chemical content of bones.

The ORIMIL project closing conference will be held in Lyon on November 4th-5th, 2015 at the Musée des Confluences. This conference aims to serve as a platform for the presentation of new data concerning the millet record within its archaeological context in the Caucasus, in order to discuss how these data can shed new light on the question of its cultivation. This conference will be an opportunity to discuss broader perspectives such as the issue of millet's westward diffusion.

The main topics of the conference will be:

- The millet crop: its taxonomy, ecology and use
- The Caucasus area: environmental and chronocultural context
- Botanical and chemical markers of millet

Scientific committee

- Ruben Badalyan, Institute of Archaeology and Ethnography, National Academy of Sciences of Armenia, Yerevan, Armenia
- Christine Chataigner, ArchéOrient UMR 5133 CNRS, Lyon, France
- Farhad Guliyev, National Academy of Sciences, Institute of Archaeology and Ethnography, Baku, Azerbaidjan
- Estelle Herrscher, Aix-Marseille University, LAMPEA UMR 7269 CNRS, France
- Françoise Le Mort, ArchéOrient UMR 5133 CNRS, Lyon, France
- David Lordkipanidze, Georgian National Museum, Tbilisi, Georgia
- Bertille Lyonnet, Collège de France, UMR 7192 CNRS, Paris, France
- Lucie Martin, EDYTEM UMR 5204 CNRS, Savoie Mont-Blanc University, France / Laboratory of prehistoric archaeology and anthropology, Geneva University, Switzerland
- Erwan Messenger, EDYTEM UMR 5204 CNRS, Savoie Mont-Blanc University / CEPAM UMR 7264 CNRS, Nice-Sophia-Antipolis University, France
- Modwene Poulmarc'h, Aix-Marseille University, LAMPEA UMR 7269 CNRS, France

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Preliminary Program

November, 4

9:00-10:00	Introduction
10:00-11h45	Session 1. The Millet : History and uses
10:00-10:15	“Millet for Dummies”. A brief presentation of ecology and uses of <i>Panicum miliaceum</i> and <i>Setaria italica</i> (L. Martin, E. Messenger)
10:15-10:45	Ethnobotany of millet cultivation in the north of the Iberian Peninsula (A. Teira-Brión, A. Moreno-Larrazabal, I. Sopelana-Salcedo, A. Arranz-Otaegui, L. Zapata)
10:45-11:15	Coffee Break
11:15-11:45	A review of the newest accounts on Chinese millets in European and central Asian Prehistory (G. Motuzaite-Matuzeviciute)
11:45-16:00	Session 2. The Southern Caucasus, from Neolithic to Early Iron Age Chronocultural and Environmental contexts
11:45-12:15	Neolithic and Chalcolithic in Southern Caucasus (C. Chataigner, B. Lyonnet)
12:15-12:45	The Kura-Araxes communities of the Southern Caucasus. Some introductory remarks (G. Palumbi)
12:45-14:00	Lunch time
14:00-14:30	Protohistory of South Casasia in Context of Socio-Economic Processes in the Near East and Eastern Mediterranean (M. Abramishvili)
14:30-15:00	Palaeoenvironment and C ₄ plants distribution in Lesser-Caucasus during the Holocene. A short introduction to the question of C ₄ plants occurrence in archaeological records (E. Messenger, S. Joannin, S. Nomade, S. Belmecheri, V. Scao, B. Wilhelm, et al.)
15:00-15:30	Holocene land use availability inferred to external forcing in Lesser Caucasus landscape changes (V. Ollivier, M. Fontugne)
15:30-16:00	Coffee Break

16:00-18:00 **Session 2. The Southern Caucasus, from Neolithic to Early Iron Age**
Archaeological investigations: some case studies

- 16:00-16:30 Aknashen: The first farmers in the Ararat valley (A. Harutyunyan)
16:30-17:00 The early village of Goytepe (mid 8th millennium BP) (F. Guliyev, Y. Nishiaki, S. Kadowaki)
17:00-17:30 At the crossroads of the Epochs and Cultures: The main results of the excavations in Godedzor (P. Avetisyan, I. Kalantarian)
17:30-18:00 The Kura-Araxes settlement of Gegharot: Agricultural community at an altitude of 2100 m (R. Badalyan)

November, 5

9:00-10:00 **Session 2. The Southern Caucasus, from Neolithic to Early Iron Age**
Archaeological investigations: some case studies

- 9:00-9:30 Early Bronze Age Kurgan from Georgia (Z. Makharadze)
9:30-10:00 Treligorebi and Treli. Ancient Settlement and Cemetery in Tbilisi (M. Abramishvili, G. Bedianashvili)

10:00-12:30 **Session 2. The Southern Caucasus, from Neolithic to Early Iron Age**
Economy and cultural practices

- 10:00-10:30 Palaeoecology and morphological adaptation of population during the Early Bronze Age: Chobareti and Tiselis seri settlements and cemeteries of the Kura-Araxes culture (L. Bitadze, E. Kvavadze, K. Kakhiani, G. Gogochuri)
10:30-11:00 Plant exploitation and environments in the Southern Caucasus, from Neolithic to Early Bronze Age (A. Decaix, M. Tengberg, R. Neef)

11:00-11:30 **Coffee Break**

- 11:30-12:00 Pastoral strategies in the Caucasus (VI-IIIrd mill BC) (R. Berthon, A. Bălăşescu)
12:00-12:30 From funerary practices to the biological identity of humans: Sampling strategies for laboratory analyses (M. Poulmarc'h, F. Le Mort, L. Bitadze, E. Herrscher, C. Bon)

12:30-14:00 **Lunch time**

14:00-18:00 **Session 3. Millet markers**

- 14:00-14:30 On millet cultivation in the prehistoric Southern Caucasus (R. Hovsepyan, L. Martin, N. Rusishvili, A. Decaix, C. Longford)
14:30-15:00 Miliacin from broomcorn millet – a fossil molecule of multiple interests for archaeologists and paleoenvironmentalists (J. Jacob, A. Simonneau, N. Bossard, C. Le Milbeau, M. Lavrieux, G. Motuzaitė-Matuševičiūtė et al.)
15:00-15:30 Articulating ancient lives: Agro-pastoralism and diet in Bronze Age societies in the South Caucasus (M. Marshall, R. Hovsepyan, B. Monahan)
15:30-16:00 **Coffee Break**
16:00-16:30 The Bronze Age North Caucasus and the human diet and animal fodder in the adjacent steppe region: discussion of variations and interpretation of isotope data (N. Shishlina)
16:30-17:00 Writing the history of millet crop in the Southern Caucasus: How stable isotopes can help us? (E. Herrscher and the members of ORIMIL project)
17:00-18:00 Discussion

POSTERS

- *Exploratory study on bone apatite preservation and stable isotope ratios: interest for millet detection in Prehistoric Caucasus (G. Goude, M. Lebon, A. Mazurié, G. André, E. Herrscher)
*Social status of individuals discovered at Ananauri #3 “big” kurgan (Eastern Georgia): A dietary investigation inferred from stable isotopes (E. Herrscher, Z. Makaradze, M. Chkadua, N. Vanishvili, D. Lordkipanidze)
*Archaeobotanical analyses on a Neolithic site: macrobotanical remains from Gadachrili Gora (Georgia) (A. Decaix, C. Hamon, M. Jalabadze, N. Rusishvili)