A - The settlements investigated

The “petite Seine” valley is the part of the Seine valley located before the confluence with the large Voreux river above Paris. This area is subject to frequent river overcrowtions, mostly due to intense rainfall extraction.

Recently, 11 new areas linked to the area were archeologically explored (i.e. RT and B. Bouchette et al., 2012). Most of them are small open air settlements whose occupations are not continuous. Two main occupations are the sites of Balloy sub, Bassée, Elbeuf sub and Noyen sur Seine. Balloy sub is a fortified site with anthropic features, and Buchères is an open site, with unexplored occupation for the whole of Late Bronze Age, early Iron Age, which experimented a several group settlement at the end of Late Bronze Age.

Features sampled and analysed are mainly refuse pits and some post-holes. They were covered for the most part in inalienable and waterlogged plant remains. Results presented here come from chosen remains.

B - The crops

A large diversity of plants is cultivated since the beginning of Late Bronze Age (in the area no records are available for earlier periods of Bronze Age) and until the end of Early Iron Age. A total of 27 crops has been registered: 10 cereals, 4 pulses and 3 oil plants. Up to 15 have been found on the same settlement for the same period.

Food production is based on hulled barley, broomcorn millet, and a great diversity of hulled and naked wheats. The most important are emmer, spelt, einkorn, and, in some cases, “new” glume wheat. Naked wheats, metaploid and haploid types seem less important, as a foral millet compare to broccsimer millet. Naked barley is unexplored.

Pulses take a large part in food production. They are found in about 65% of the samples and represent about 20% of the remains (pea stocks excluded). Lent and bitters which are the most frequent and abundant. Pea and fava bean are regularly mentioned.

Oil plants are found in 16% of the samples. Gold of pleasure is by far the most important but the most frequent and abundant. Pea and fava bean are regularly mentioned.

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C - The role of the “new” glume wheat

Spikes bases of “new” glume wheat have been identified in the sites for different periods of Late Bronze Age and the transition of Late Bronze Age-Early Iron Age. For settlements of later periods, there are no findings.

“New” glume wheat is important only during the first two steps of LBA, i.e. during Bronze-Hallstatt A (1350-1160 BC) and Hallstatt B2-1 (1160-990 BC) in those sites located at the most western part of the “petite Seine” valley, close to the confluence Seine/Oronne. This area of the valley is termed “La Bassée”.

In those areas, Balloy, Jaulnes, and Noyen sur Seine, between 72 and 205 remains have been identified (1% of the total remains). Some sites (Balloy, Jaulnes) have been extensively sampled (100% of the total remains).

In these three sites, the largest diversity of crops is observed: 15 in Balloy, with the mention of 10 new wheats of hulled and 4 or 2 ranked including metaploid type.

The measures taken on the width of glume and spikelet bases show great similarities between the three settlements. However, if we observe all the archaeobotanical studies made for Late Bronze Age settlements in Champagne-Ardenne and Ile-de-France regions (which are mostly recent studies, map 2 above), we can see that “new” glume wheat remains are scarce, and for is registered only in the valley. We can make two hypotheses for the presence:

1 - “New” glume wheat arrived in earlier periods (Neolithic) and was cultivated until Late Bronze age

- This would fit well with the importance of the same area during Bronze Age and to the Seine, known for its good agricultural potential. Furthermore, if mention of “new” wheat are scarce today in French settlements, more and more are coming, and we get the future other indications for the history of this wheat on the French territory.

2 - “New” glume wheat arrived in earlier periods (Neolithic) and was cultivated until Late Bronze age

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D - Hypothesis for the presence of NWG in the “petite Seine” valley during LBA

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Conclusions:

- In the “petite Seine” valley, the presence of “new” glume wheat has been identified, this wheat seems to be a crop of the same importance as other cultivated hulled wheats (emmer, spelt and einkorn). The chronology of these settlements is included in the first two steps of Late Bronze Age (1350 - 1160 BC).
- The presence of “new” glume wheat in this area during Late Bronze Age could be linked to north-alpine influences, very strong in the Bassée, area of the Seine/Oronne confluence.
- Nevertheless, if mentions of “new” glume wheat are scarce today in French settlements, more and more are coming, and we get the future other indications for the history of this wheat on the French territory.

Bibliography