

Mid Symposium excursion of the 19th International Symposium on Ostracoda Lyon 2022

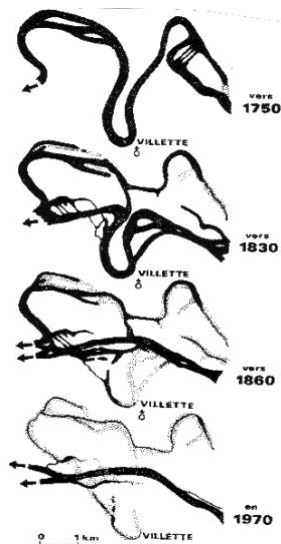
1 – Ostracods of the alluvial plain of the Rhône River (with Prof. Pierre Marmonier, Lyon).

The morning of the mid-symposium excursion will focus on the ostracod species found in the **alluvial plain of the Rhône River** just upstream of Lyon.

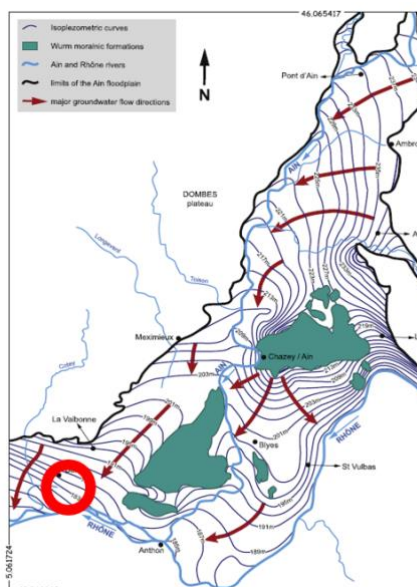
The Rhône River was a large active mountain river that developed from the Alps mountains to the sea, crossing a set of large floodplains where the river moved laterally. Three processes explain the diversity of ecosystems found in these floodplains:

- The **river mobility** generated a large set of abandoned channels (see figure below), that progressively changed with sediment deposition, from secondary arms fed by the river at both ends, to slow flowing ecosystems only connected downstream (semi-connected stage), to stagnant wetlands completely isolated from the river (isolated stage) and to wet forest.

- During the last part of the 19th century, the river was **embanked** for flood protection (especially after the large 1856 flood), but also to maintain the river depth during low water period for commercial shipping. The resulting regulation induced an isolation of most of the secondary arms, increasing the transition of wetland to terrestrial systems.



Changes in channel morphology (left panel, from Juget et al., 1976) and nowadays location of the resulting wetlands (from IGN-Géoportail). Arrow indicates our sampling locations.



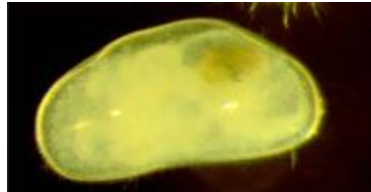
- Finally, the intensity of **groundwater inflows** inside the wetlands controls the duration of the semi-connected stage and prevent wetland drying. The resulting ecosystem is a slow flowing wetland with cold water and specific content in both macrophytes (e.g. *Potamogeton coloratus*) and aquatic fauna (e.g. the blind amphipod *Niphargus* spp.). The construction of a dam at the downstream end of the floodplain generates an increase of the groundwater level in the floodplain and an increase of groundwater inflows in the wetlands (piezometric map and hydrogeological model from Dole-Olivier & al. 2019).

The ostracods that live in this area have different distributions in the floodplain and in the microhabitats thus resulting in contrasted assemblages:

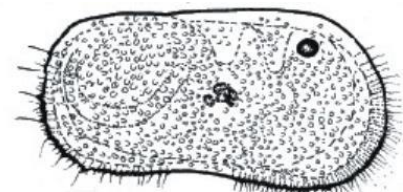
In the **active channel of the river**: the bottom sediment is colonized by *Pseudocandona albicans*, *Pseudocandona marchica*, *Fabaeformiscandona wegelini*, *Marmocandona zschokkei*, *Limnocythere inopinata* and *Eucypris pigra*. A very different assemblage is sampled in the banks dominated by *Cypria ophtalmica*, *Ilyocypris bradyi* and *Cypridopsis vidua*.



Pseudocandona albicans
(from boldsystem.org)

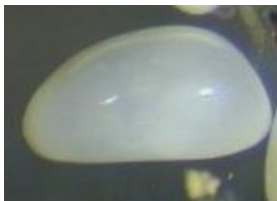


Fabaeformiscandona wegelini

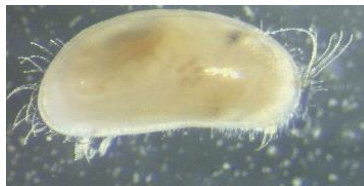


Ilyocypris bradyi

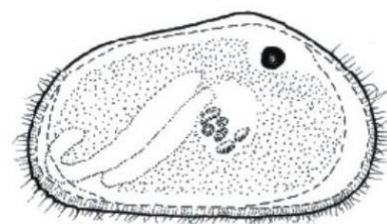
In the **abandoned channels**, fed by groundwater, with a dense vegetation, the ostracods sampled in the benthic layer rich in organic matter and in the vegetation, are rather similar with *Herpetocypris reptans*, *Prionocypris zenkeri*, *Cypria ophtalmica*, *Cyclocypris ovum*, *Cypridopsis vidua* and less frequently *Fabaeformiscandona caudata*, *Fabaeformiscandona fabaeformis*, *Isocypris beauchampi* and *Dawinula stevensoni*. In contrast, *Candona candida*, *Candona neglecta* are more frequent in the spring where the groundwater upwells through white clean sand.



Candona candida

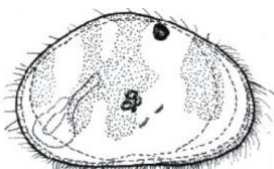


Herpetocypris reptans

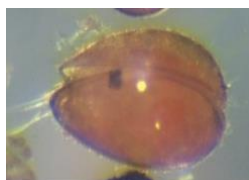


Prionocypris zenkeri

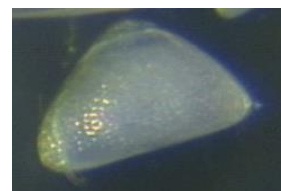
Finally, in the **isolated ponds**, characterized by a muddy bottom and a stagnant water, planktonic ostracods can be sampled with *Notodromas monacha*, *Bradleystrandesia obliqua*, *Bradleystrandesia reticulata*, while *Cypria ophtalmica* and *Cyclocypris ovum* are found in the vegetation and *Schellencandona triquetra* in the groundwater.



Cypria ophtalmica



Cyclocypris ovum



Schellencandona triquetra

2 – Visit of the medieval village of Pérouges.

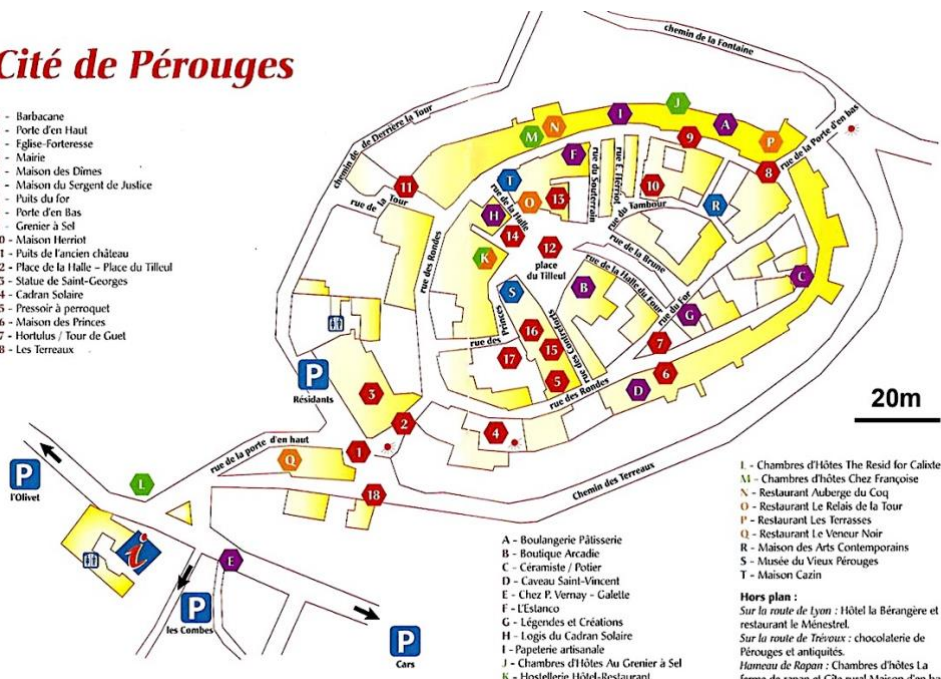
Situated about thirty kilometers East of Lyon, perched on its hill overlooking the plain of the Ain river, Pérouges is a very typical French Middle Ages village. Pérouges is a great place for a quiet stroll where one can marvel at the beauty of the architecture of the Middle Ages or sample the traditional cake the ‘Galette de Pérouges’.

Pérouges the medieval. Like any medieval city, Pérouges has known an alternation of flourishing periods and more turbulent times... From the Middle Ages, the prosperous city of weavers enjoyed its strategic position on the Dombes plateau and on the road of fairs between Lyon and Geneva. In the 15th century, the village passed in turn from the hands of the Dauphinois to those of the Savoyards then, in the 16th century, it suffered the French wars of religion. Multiple testimonies of the medieval past of Pérouges have survived the centuries. The ‘Porte d'En-Haut’ (2 on the map below), through which one currently enters the city, is splendid with its heavy door and gives access to the 15th century church-fortress (3), unique in the Ain region. The old route of the ramparts gives the town its elliptical shape. The ‘Porte d'En-Bas’ (8), almost completely destroyed during the last Dauphinois assault, offers a very beautiful panorama on Meximieux and the Ain valley. The ‘Hostellerie du Vieux Pérouges’ (K), a superb half-timbered house from the 12th century, remains an institution on the ‘Place du Tilleul’ (12) where the tree planted just after the French Revolution still reigns... Finally attached to the Kingdom of France in 1601, Pérouges then experienced a period of prosperity thanks to weaving and viticulture.

From Renaissance to renaissance. The prosperous period of the Renaissance also left its mark on the exceptional heritage of Pérouges. Along the walk on the uneven pebbles unearthed in the soil of the Dombes, the stalls and the houses of weavers with corbelled facades, adorned with mullioned windows, alternate with few houses of notables. This flourishing period was probably the last experienced by the city before it came close to extinction at the beginning of the 20th century. Deserted by its inhabitants, it was on the verge of demolition when in 1911, artists and notables created, under the impetus of Anthelme Thibault, owner of one of the last six inhabited houses in the village, the ‘Comité du Vieux Pérouges’. This initiative obtained the support of Édouard Herriot, then Minister of Fine Arts (and future Mayor of Lyon) who also became owner in Pérouges. Thanks to the hard work of these enthusiasts, the village then signed its ‘renaissance’. It is by drawing on its past as a merchant city that Pérouges today built its future and welcomes artists and craftsmen, living and creative guardians of this magical place which has become one of the ‘Most Beautiful Villages in France’ in 1988!

Cité de Pérouges

- 1 - Barbacane
- 2 - Porte d'en Haut
- 3 - Eglise-Forteresse
- 4 - Mairie
- 5 - Maison des Dîmes
- 6 - Maison du Sergent de Justice
- 7 - Puits du for
- 8 - Porte d'en Bas
- 9 - Grenier à Sel
- 10 - Maison Herriot
- 11 - Puits de l'ancien château
- 12 - Place de la Halle - Place du Tilleul
- 13 - Statue de Saint-Georges
- 14 - Cadran Solaire
- 15 - Pressoir à perroquet
- 16 - Maison des Princes
- 17 - Hortulus / Tour de Guel
- 18 - Les Terreaux



- I - Chambres d'Hôtes The Resid for Calixte
- M - Chambres d'Hôtes Chez Françoise
- N - Restaurant Auberge du Coq
- O - Restaurant Le Relais de la Tour
- P - Restaurant Les Terrasses
- Q - Restaurant Le Veneur Noir
- R - Maison des Arts Contemporains
- S - Musée du Vieux Pérouges
- T - Maison Cazin

Hors plan :
Sur la route de Lyon : Hôtel la Béringère et restaurant le Ménéstrel.

Sur la route de Trévoux : chocolaterie de Pérouges et antiquités.

Hauteville de Rapan : Chambres d'hôtes La ferme de rapan et Gîte rural Maison d'en bas

- A - Boulangerie Pâtisserie
- B - Boutique Arcadie
- C - Céramiste / Potier
- D - Caveau Saint-Vincent
- E - Chez P. Vernay - Galette
- F - L'Esclanco
- G - Légendes et Créations
- H - Logis du Cadran Solaire
- I - Papeterie artisanale
- J - Chambres d'Hôtes Au Grenier à Sel
- K - Hostellerie Hôtel-Restaurant

3 – The Hameau Dubœuf vineyard museum and gardens.

The Hameau Dubœuf is the first theme park on the vine and wine in Europe (<https://www.duboeuf.com/en/the-park/>).

The visit includes about fifteen thematic rooms around the wine, a journey through 2000 years of vineyard professions. Starting in the 'Salle des Pas-Perdus' (*room of lost steps*), we'll walk around a reconstruction of a 1900s-style train station hall which presents the history and traditions of the Beaujolais and Mâconnais. Then we'll explore 3500 years of winemaking history, with a large collection of 3000 ancient objects, winegrowers' tools and works of art. The cellars dating from 1855 are still in use for the maturing of a part of the wines of the Maison Dubœuf. The geology and grape varieties room presents the different grape varieties and terroirs of the Beaujolais and the Mâconnais.

We'll then move to the Wine Making Center which offers a behind the scenes of Georges Dubœuf wines vinification. In this center, a gallery of portraits of famous winegrowers from the Beaujolais and Mâconnais regions will welcome us before exploring the techniques of wine making in the calm of the cellars or among the 150 stainless steel vats and the 6 oak vats.

Finally, in the heart of the vineyards, the 'Jardin en Beaujolais' (*Garden in Beaujolais*) will take us through the scents of flowers, bark, fruit and spices that make up the richness of wine aromas. Organized in six thematic clos this garden is a dream place for plant lovers and family walks.

After the visit, we will end the mid-symposium field trip with some tasting of regional wines before heading back to Lyon.

