

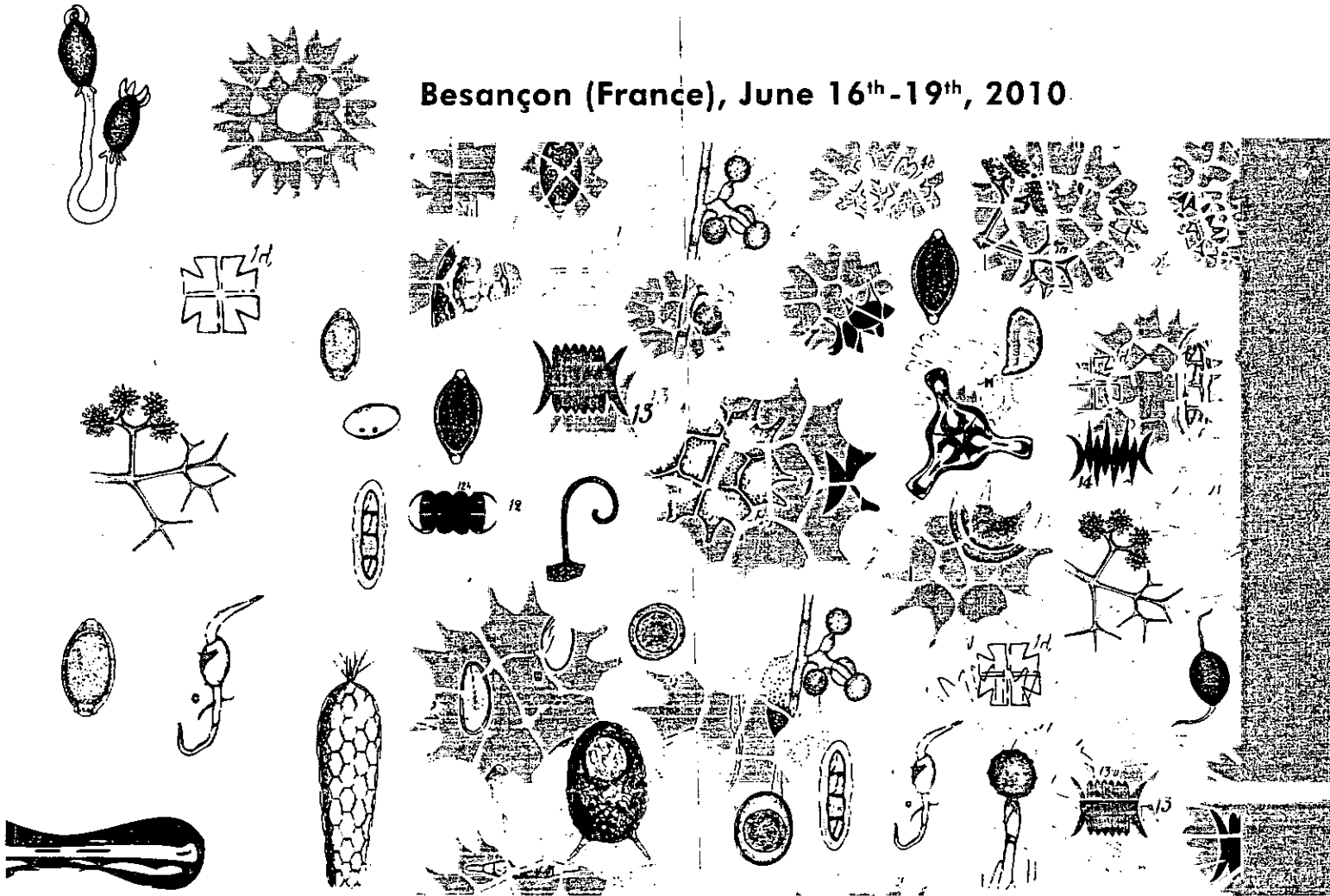


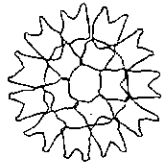
4TH WORKSHOP

NON POLLEN PALYNOFORMS

PROGRAM

Besançon (France), June 16th-19th, 2010.





Pollen and non-pollen palynomorphs from PL1 core at Piano Locce (Gran Sasso - Italy)

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In July 2008, a 10 meters long core was taken for pollen analysis at Piano Locce (1225-1240 m a.s.l., 42° 21' N, 13° 37' E), on the southern side of the Gran Sasso, near S. Stefano di Sessanio (L'Aquila-Italy). Piano Locce is a pentagonal shaped tectono-karstic depression (polje) wide about 1 km². It is covered by a grassland and surrounded by mountain peaks devoid of forest cover, with the exception of Monte Carpesco. The core is made by lacustrine and pedogenetic materials alternated, the latter almost exclusively formed on medium-fine textured pyroclastic deposits coming from the Co-magmatic Roman Province. The core is dated 36.000 years ago at 5 m depth, based on chemical analysis of volcanic minerals (Magaldi *et al.*, 2009). Pollen and non-pollen palynomorphs analyses were carried out on 60 samples along the upper 5 m so far. Most of them contain pollen (p) and non-pollen (npp). Concentrations are notably variable (10²-10⁵ both for p/g and npp/g); preservation is in general good. 80 pollen taxa and 22 non-pollen types have been identified so far. Non-pollen nomenclature follows van Geel (van Geel & Aprot, 2006). The pollen diagram (provisional) provides palaeovegetational data from the Upper Pleistocene to recent times. The lower part of the record is characterized by a steppe vegetation (*Artemisia*, Caryophyllaceae, Chenopodiaceae, Cichorioideae, Gramineae...) with scanty records of woody plants pollen and gives evidence of the Last Glacial. A low trees/shrubs increase likely testifies late glacial oscillations. During the Holocene, trees/shrubs percentages remain low (average ca. 10% - 25%), but flora includes a notable number of taxa (conifers: mainly *Pinus mugo*, *P. nigra*, *Juniperus*; deciduous broadleaves: mainly *Alnus*, *Betula*, *Castanea*, *Corylus*, *Fagus*, *Fraxinus excelsior/oxycarpa*, *F. ornus*, deciduous *Quercus*, *Salix*, *Tilia*, *Ulmus*, etc.). In the top part of the diagram cultivated plants, mainly cereals, Juglans and Castanea increase. Non-pollen records mainly provide information about human activity, e.g.: 1) the increase of coprophilus fungi (such as *Sporormiella* type, *Sordaria* type, *Apiosordaria*, *Coniochaeta cf. lignaria*, Type 55B, *Valsaria* type) in levels characterized by Cichorioideae, Asteroideae, *Cirsium*-type, *Galium*-type, Ranunculaceae, *Stellaria*-type pollen confirms the hypothesis of grazing (Mazier *et al.*, 2006); 2) the occurrence of microcharcoal together with *Chaetonium* sp. spores suggests local fires devoted to pasture; 3) the occurrence of *Glomus* chlamydospores could be evidence of erosive phenomena (van Geel *et al.*, 1989).

References

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