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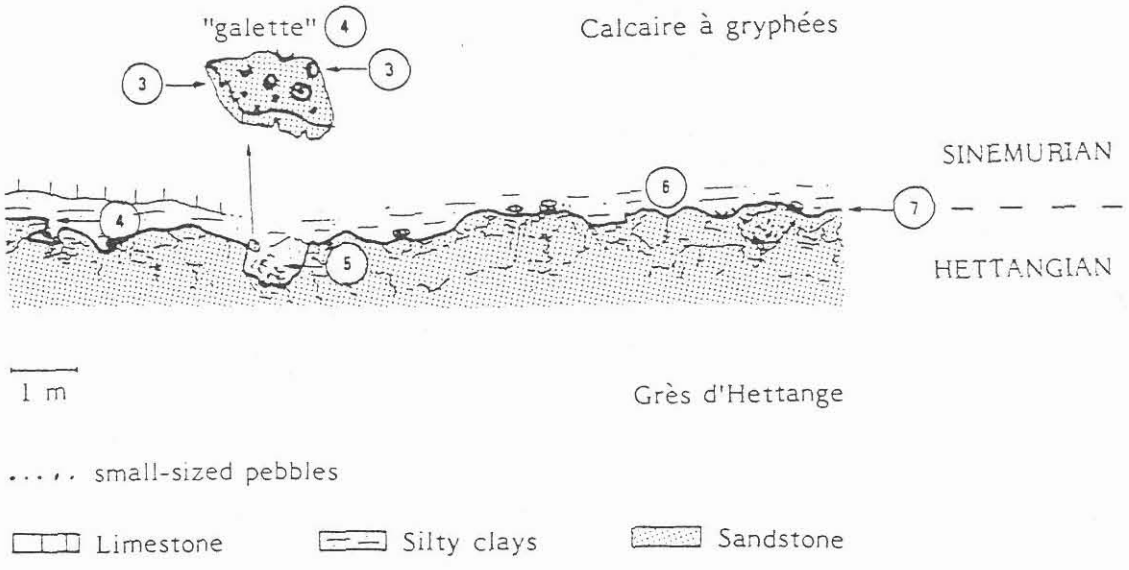
EVENTS DEVELOPED DURING A SEDIMENTARY UNCONFORMITY. THE EXAMPLE OF THE HETTANGIAN STRATOTYPE, FRANCE

HANZO, M.
Laboratoire de Géologie des Ensembles Sédimentaires,
Université de Nancy I, France

In Hettange-Grande (Moselle - France), the Uppermost Hettangian is of sandy composition and corresponds to the Grès d'Hettange (30 m). The latter is overlain by the upper part of the Calcaire à gryphées Formation (Sinemurian).

The sharp contact between both lithological units is underlined by a very irregular interesting unconformity, well exposed in plane and in section.



The detailed study of this unconformity allows to establish an accurate chronological model of the sedimentary events that took place during the gap and the change in sedimentation. These are :

1 - bioturbation of the sand ;
2 - surficial sediment lithification ;
3 - biological actions : boring, settlement of oysters, serpulids ;
4 - mechanical erosion : gullying, breaking-down of overhanging parts of the sediment producing "galettes" ;
5 - trapping of material in holes (as bioclasts, small-sized pebbles and phosphatic concretions) ;
6 - renewal of sedimentation, with deposition of silty clays embedding the unconformity ;
7 - late events : oxydation of pyrite nodules and gypsification at the surface.

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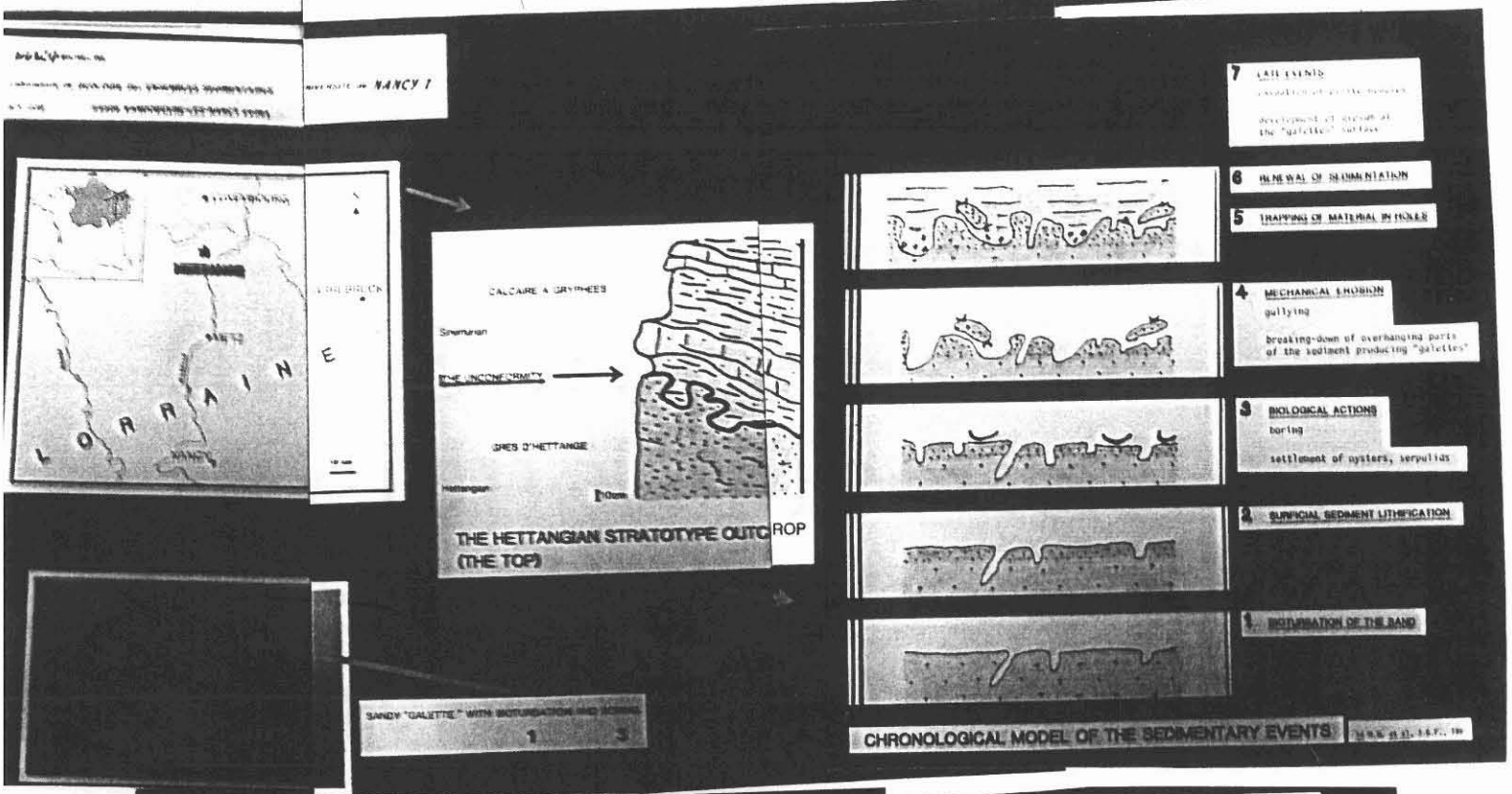
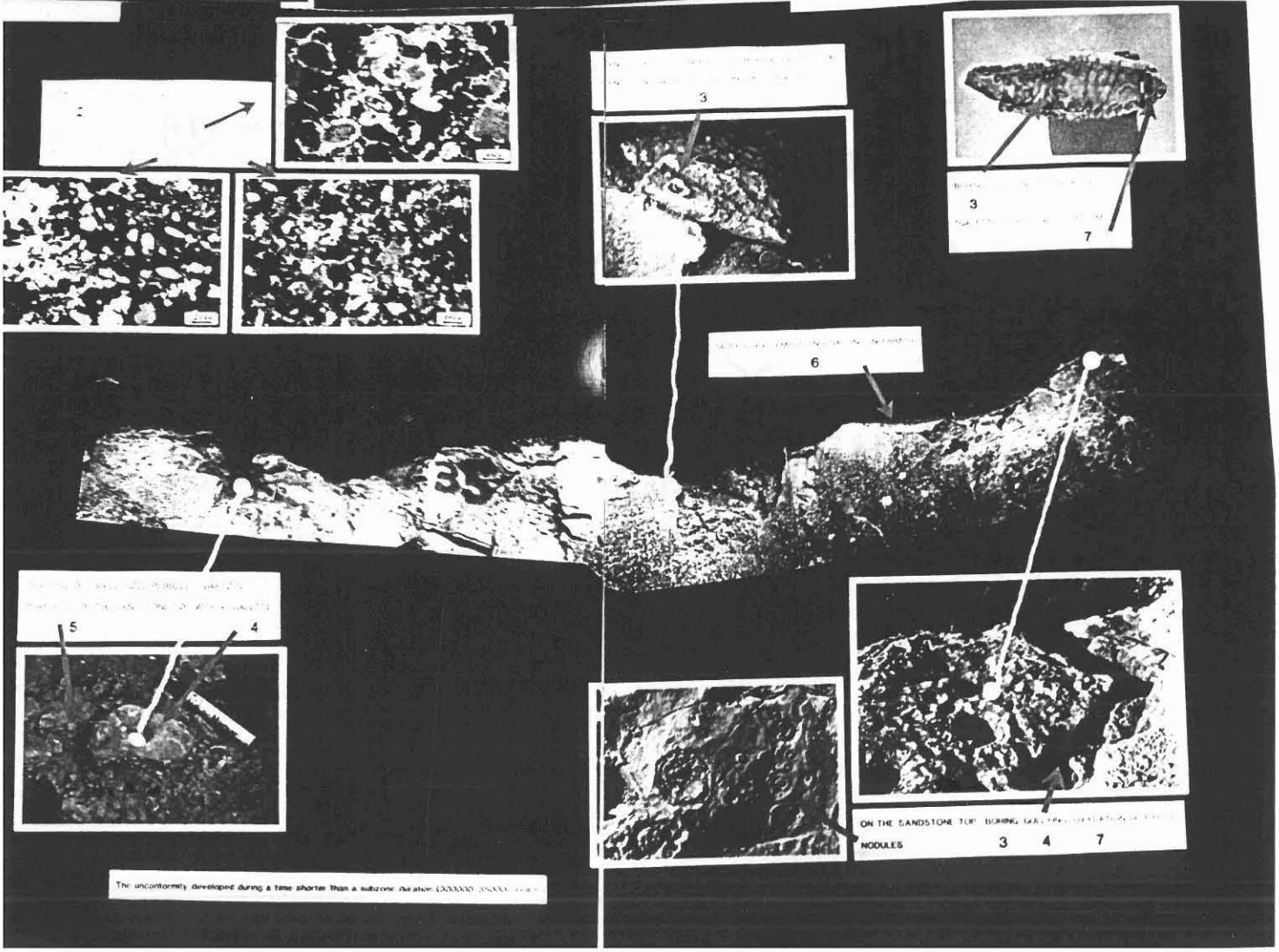
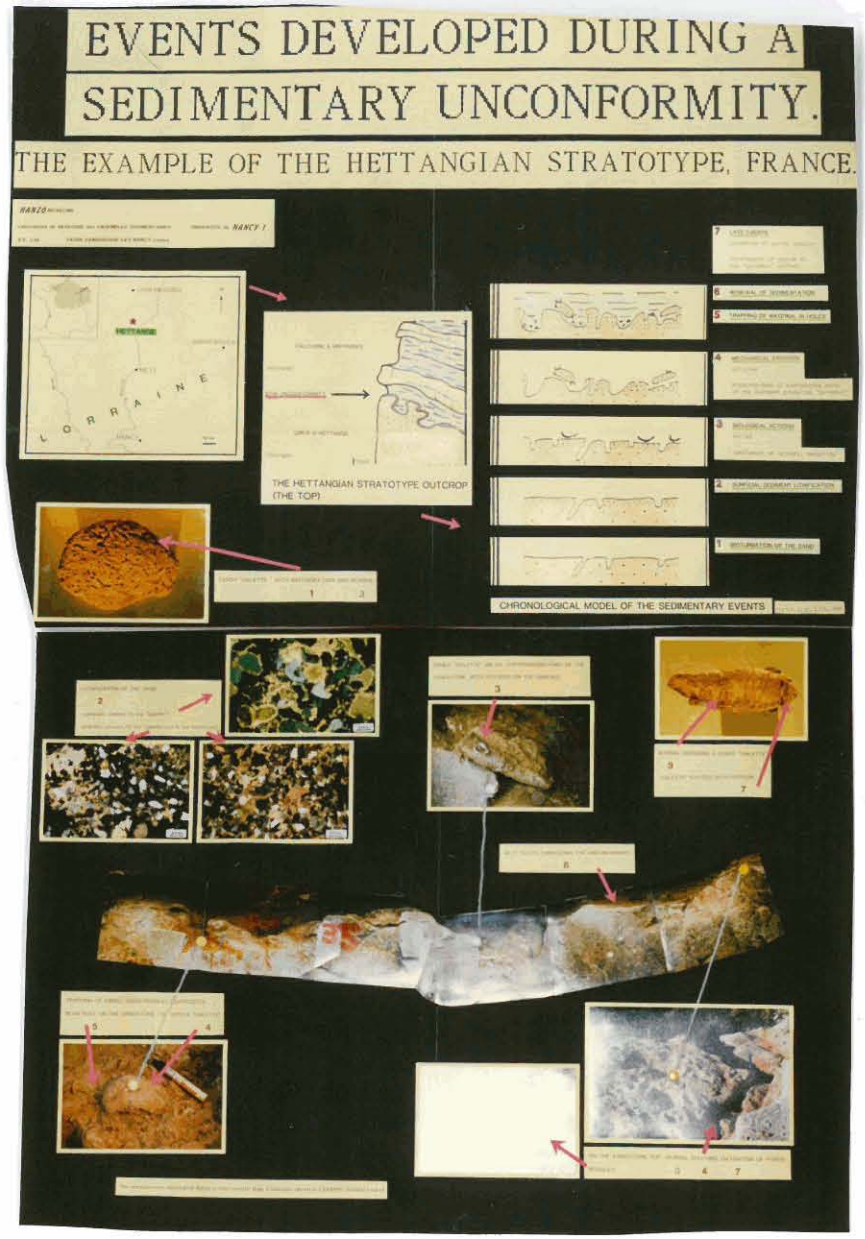




The unconformity developed during a time shorter than a subzone duration (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THE EXAMPLE OF THE HETTANGIAN STRATOTYPE, FRANCE.
HETTANGE
LORRAINE
THE HETTANGIAN STRATOTYPE OUTCROP (THE TOP)
CHRONOLOGICAL MODEL OF THE SEDIMENTARY EVENTS