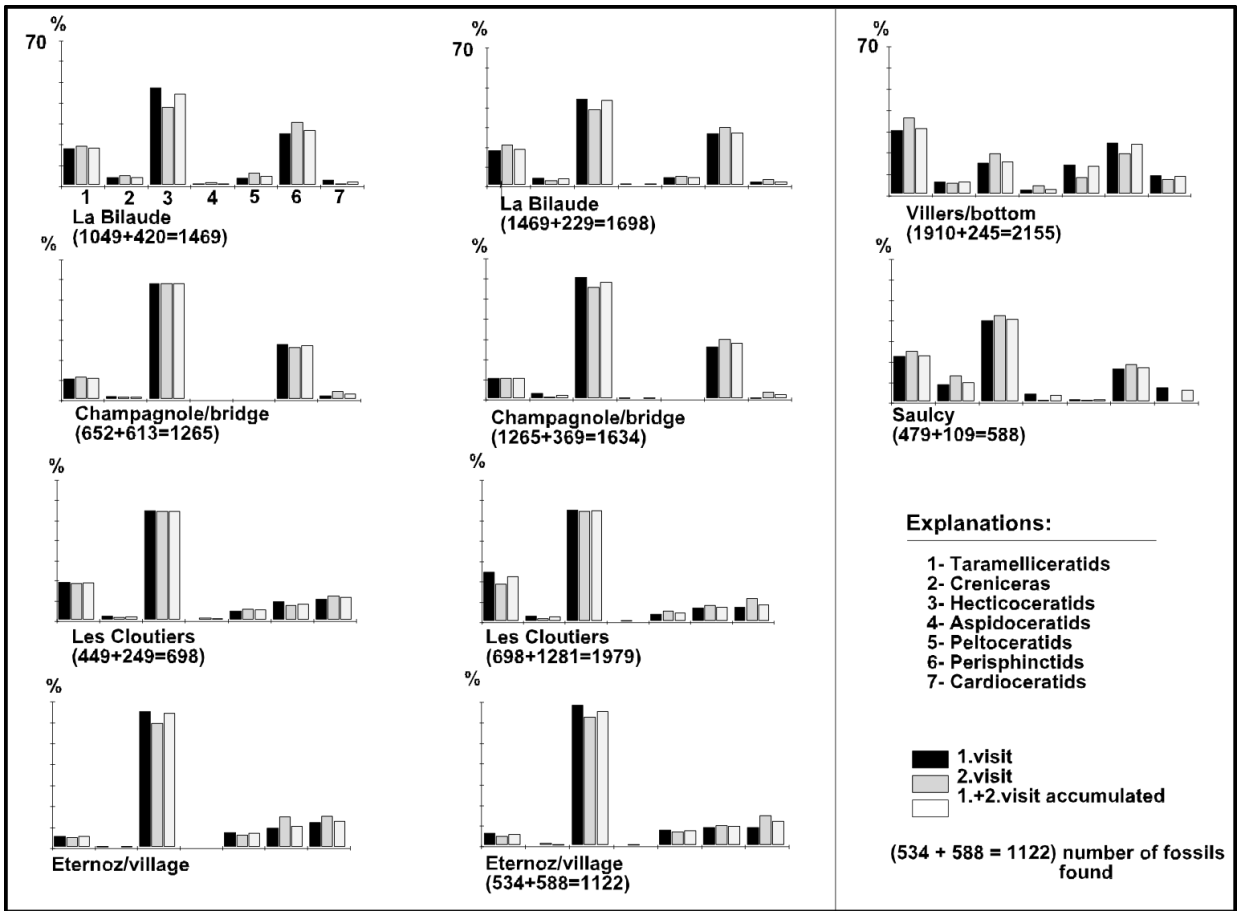
The Abbreviations:

Abrev.	Finding place	Abrev.	Finding place
ARK	Arkell	F_TSt	France-Tarcenay road (Strasse)
D'LOR	De L'Oriol	F-TStu	France-Tarcenay road, bottom (Strasse unten)
JAR	R.Jardat	(F_)TStGr	France-Tarcenay roag (Strasse Graben)
CH_Ll	Switzerland-Liesberg, left	(F_)TStB	France-Tarcenay road, banc (Strasse Bank)
(CH_)Ll	Switzerland-Liesberg, left	(F_)TStHu	France-Tarcenay road,slope bot.(Str, Hang unten)
D_Ku	Germany – Kandern, bottom (unten)	F_LCl	France-Les Cloutiers
(D_)Ku	Germany – Kandern, botto,(unten)	V_s_Mer	France-Villers-sur-Mer
(D_)Kgu	Germany – Kandern, (utmost bottom) ganz unten		
(D_)Ko	Germany – Kandern, top (oben)		

Pros and Cons of "picking up" versus "in situ"

When picking up fossils for statistical analysis afterwards, one could expect that individually only big pieces are collected or only specific species or only well preserved pieces. These facts therefore, might have a big influence on statistical analysis fauna profiles.

Picking up fossils should not mean picking them up on a slope, because rain could have flushed them downhill.

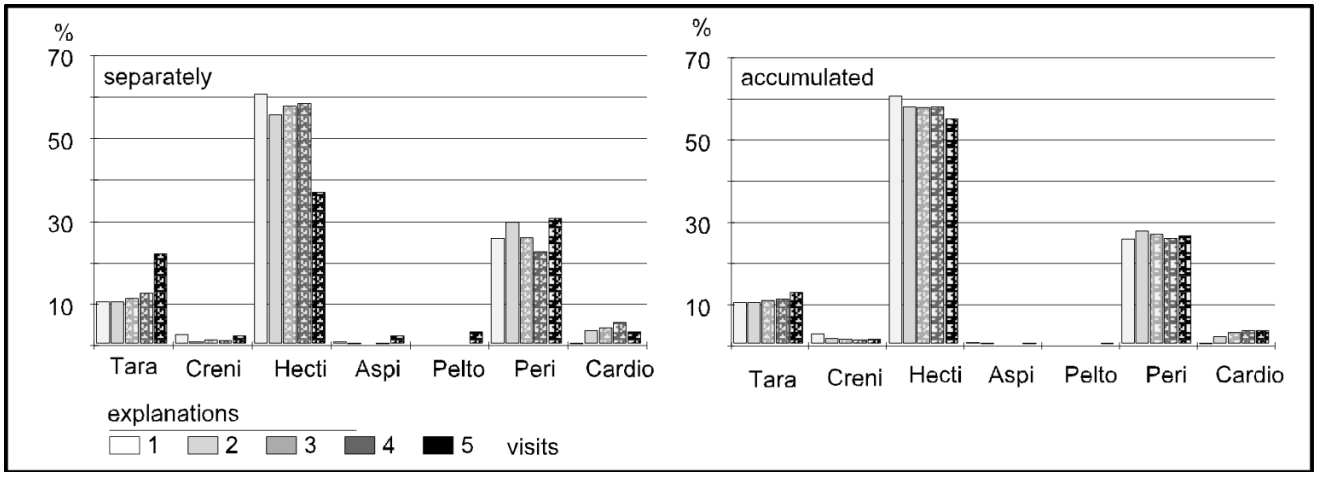


Changing of fauna profiles (same scale)

Surprisingly (though there are minor differences) the main characteristics of a fauna profile remains the same even after several visits of "picking up".

The outcome is quite different as soon as the number of findings comes down below a certain number. In my opinion a fauna profile varies quite remarkably if it is based on less than 250 found fossils. Nevertheless, a fauna profile only allows conclusions on its specific site.

The following picture shows the changes in fauna profile after 5 visits. The left graph shows the profiles of single visits, the right one accumulates the findings of the different visits.



Changing of a profile after several „pick up" visits

While the right part of the graph (accumulated figures) only shows insignificant changes, only profile 5 at the left graph shows some difference.

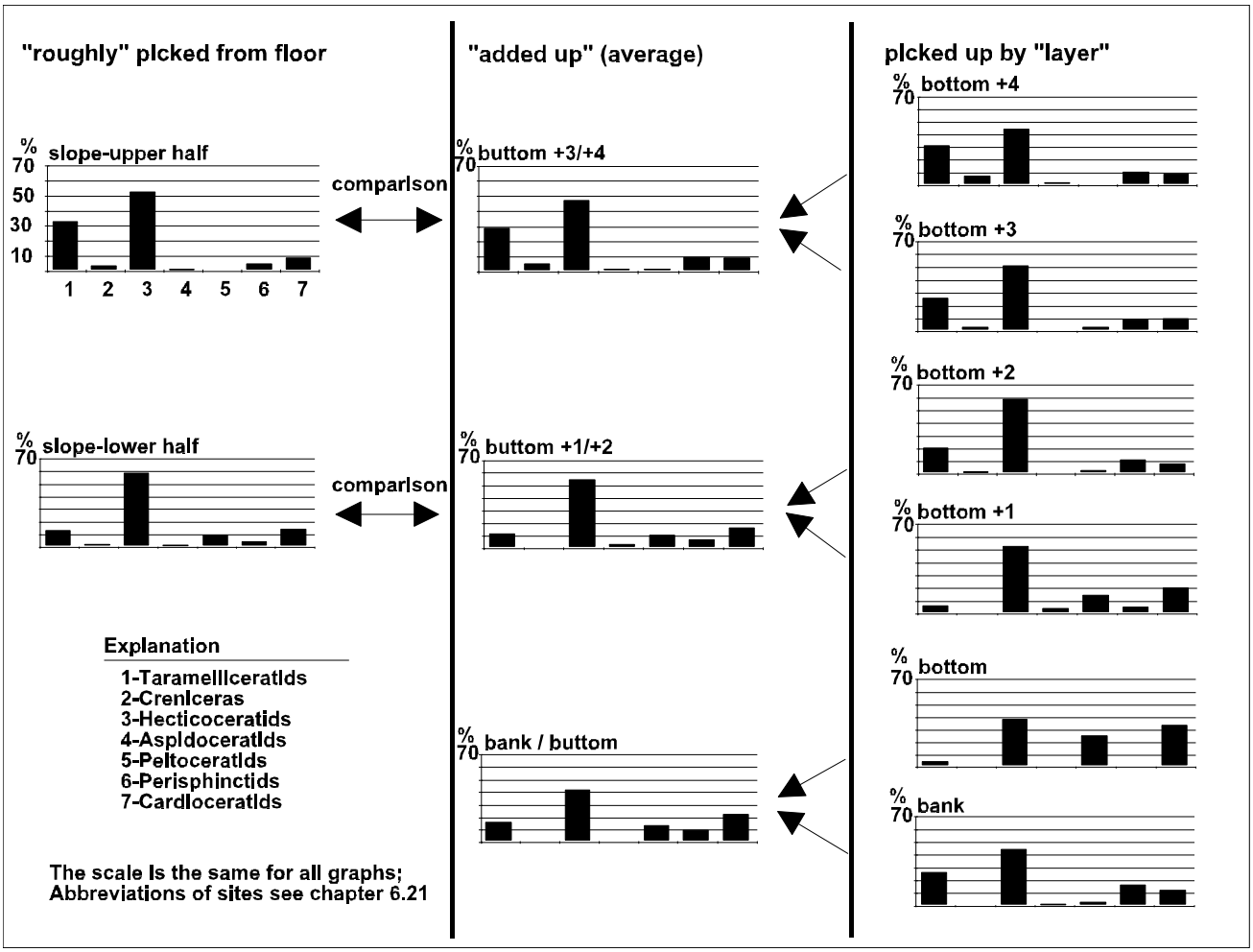
As a conclusion one can say that these faunal profiles are very typical for certain sites but not realy for a sub-chron or chron.

How to define where "in situ" or "picking up":

Liesberg-left: 1 m from 'anceps/athlete-banc = 'scarburgense',
23.5 m = 'praecordatum' (but is it start/middle/end of praecordatum ?
2 m from 3 wachholder trees on picture at top/left

Tarcenay/road ~ 6-8 m, Liesberg / links 50 m

Difficult to say, whether faunal spectrum Tarcenay-road is representative for the Renggeri Marl.



Changes of a profile by the way of picking up the fossils (Tarcenay/road)

Within the site Tarcenay/road, the construction work was still in progress. As it has not rained one can assume that no fossils had been flushed down the slope. By picking up the fossils one can assume that they were still more or less "in situ".

Later in the year it was assumed that at least some fossils were coming down the slope so they were collected and stored by slope / lower part and slope / upper part. The upper graph is a trial to check whether fossils collected later still have a stratigraphical meaning.

The right part of the graph shows 6 detailed stratigraphical collections, the middle column is a statistical accumulation of the right one, and the left part the more roughly collected fossils. Surprisingly the left and middle part correspond quite good. But the conclusions out of slope / lower part and slope / upper part are still a bit less than the detailed profiles.