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Spanish sections: Correlation of magnetozones and MN-zones

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High resolution mammal data from Spain point out the specific problem of MN4, MN5 and MN6 correlations. Especially in the Aragonian area with the Aragonian type section, a good correlation between mammal MN-zones and magnetostratigraphy was constructed. The following table shows the correspondence between the local mammal zones A - I and the MN-zones:

Local zonation	MN zonation
A	3
B	4
C	4
D (Da, Db, Dc, Dd, De)	5
E	5
F	6/7
G	7/8
H	9
I	9

Tab. 1: Correlation of Spanish local mammalia zonation with European MN-zonation.

The Armantes section provided very good magnetostratigraphic results, allowing an unambiguous correlation to the GPTS of CANDE & KENT (1995). The magnetostratigraphy of the Aragonian type section fits quite well to the magnetic record of the Armantes section. The MN4 - MN5 boundary was placed at the top of chron C5 Cn.1n (about 16 Ma), and the MN5

- MN6 boundary at the end of chron C5Acn (Fig. 1). These time constraints raise the problem of a 1 m.y. difference with other correlation schemes, especially in the Central Paratethys and the Eastern Mediterranean area.

The dates of the MN-zones are based on the correlations of our Early Aragonian faunas (local zones B and C) to MN4, of the Middle Aragonian faunas (Zone D) to MN5 and of the Late Aragonian Zones F – G2 faunas to MN6 (DAAMS et al. 1999). MN4 is recognised with the co-occurrence of *Democricetodon* and *Ligerimys* (a characteristic feature of the fauna of La Romieu, reference locality of MN4). MN5 is recognised on the basis of the absence of *Ligerimys* and the expansion of *Hispanotherium* (in agreement with the proposal of the Salzburg meeting in 1995). *Cricetodon* appears in Spain in Zone E. The lower boundary of MN6 is drawn at the replacement of *Megacricetodon collongensis* (last occurrence in Zone E) by *M. gersii* in Zone F. The latter species is present in Sansan, the reference locality of MN6.

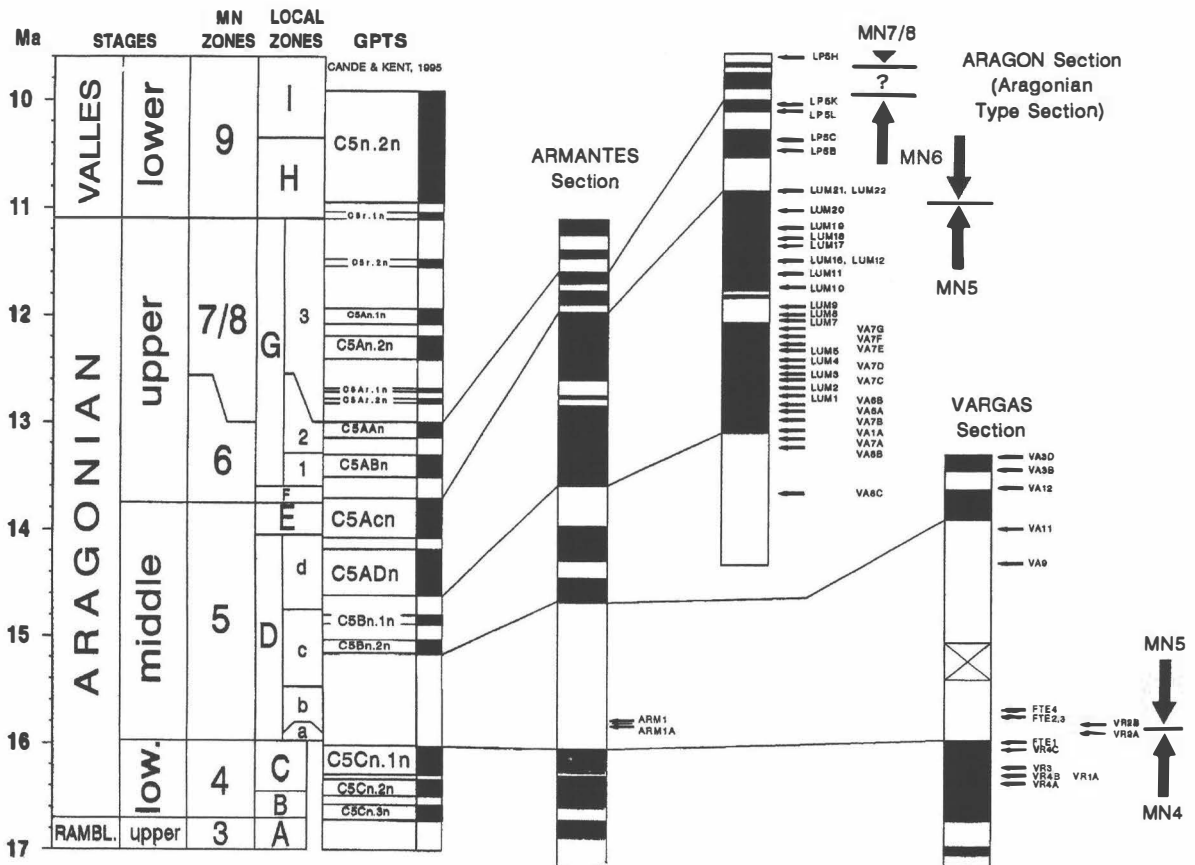


Fig. 1: Magnetostratigraphy, mammal biostratigraphy of Aragonian sections and correlation with GPTS (from DAAMS et al. 1999).

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