

AMMONITE FAUNAS AND CORRELATIONS IN SOUTH-WEST ENGLAND: REPLY TO WYATT (1998)

K. N. PAGE

English Nature, The Old Mill House, 37 North Street, Okehampton, Devon, EX20 1AR



Discussion: Page (1996) presented a review of the sequence of Bathonian ammonite faunas in south-west England (Dorset to Bath). Details were provided of the known occurrence (locality and *reported* lithostratigraphic unit) of all key faunas. These faunas were placed in a Submediterranean standard zonation, the "traditional" "Subboreal" scheme of previous authors (e.g. Torrens 1980) being considered to be unnecessary, as it emphasises the faunal impoverishment of northern areas rather than the similarities which existed throughout most of north-west Europe at the time. A single figure (Fig. 3) summarised the consequences of using this scheme and the reported occurrence of the ammonite faunas detailed to correlate the Bathonian rocks of the region.

Wyatt (1998) reviews how classical field and borehole work began to unravel the complex relationships between the various Middle to Upper lithostratigraphical units present between Bath and Sherborne culminating in the detailed report of Penn and Wyatt (1979). This review includes a critique of Page (1996) and several comments made require a response:

1. Contrary to the impression given by Wyatt (1998), full explanation of the location and *reported* horizon of all ammonite faunas used to compile Figure 3 are provided in the text of Page (1996). There is no discussion of purely lithostratigraphical correlations, and especially of non ammonite-bearing levels, as this was not the aim of the paper.

2. Considerable discussion by Wyatt revolves around the interpretation of the Rugitella Beds and their lateral equivalents. Having accepted the lithostratigraphical interpretation of Torrens (1980) of a section near East Cranmore and examined the ammonite faunas from the site preserved in Bristol City Museum, the conclusion that the unit ranges from Fortecostatum to Quercinus subzones was unavoidable and a correlation of the higher levels with the Wattonensis Beds of more southerly areas thereby established (see Page 1996, Fig. 3). Wyatt's reinterpretation of this section as including Rugitella Beds, Upper Fuller's Earth Clay and Frome Clay is plausible, but serves only to insert a non sequence into his Figure 1, separating the Wattonensis Beds from a restricted Rugitella Beds below.

3. There is no ammonite evidence to prove that the top of the Combe Down Oolite is any younger than *hodsoni* Biohorizon (cf. Page 1996, fig. 2; i.e. upper Quercinus Subzone in that work and not Blanzense as in Wyatt 1998, Fig. 1). Sections in Spain have demonstrated that higher faunas yield *Proceritesex* grp. *twinhoensis*

Arkell (Page and Melendez 1997). The latter has been recorded only in Twinhoe Ironshot facies in the district and *not* in Winsley and Freshford facies which appear to have only yielded younger faunas. This observation suggested the possible presence of a non- sequence separating the Combe Down Oolite from the latter facies as shown on Fig. 3 of Page (1996). Wyatt's contention that the facies of the Twinhoe Member (Twinhoe Ironshot, Winsley and Freshford facies) are diachronous is not therefore supported by any biostratigraphical evidence.

Concluding remarks. Rather than conflicting with earlier interpretations of the stratigraphical relationships of Bathonian rocks in the Bath - Sherborne district, the lithology-independent ammonite-based correlation of Page (1996) largely confirms the conclusions of authors such as Penn and Wyatt (1979). Wyatt (1998) reaffirms the basis on which the latter were established. Apparent discrepancies between the two works are due largely to differing interpretations of published lithostratigraphical records.

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