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*Alligaticeras*. Within this interval, the upper 10 m has yielded common specimens of “*Cardioceras*” *paucicostatum* (Lange), hence characterising the uppermost Callovian Paucicostatum Horizon. Above this level a c. 10 m thick marly interval with thin nodular limestone intercalations has yielded few ammonites, mainly *Hecticoceras suevum*. The record of some typical specimens of “*Cardioceras*” *paucicostatum* (Lange) indicates a probable uppermost Callovian, Paucicostatum Horizon age for this interval. The next 10-11 m (levels 26-29) contain a rich ammonite assemblage yielding common *Peltoceras* sp. and *Hecticoceras* spp. (including *Brightia thuouxensis* Fortwengler). This association might in fact characterise the basal Oxfordian Thuouxensis Horizon (Fortwengler & Marchand, 1994c, 1997). However, the record of scarce specimens of *Cardioceras* still showing the dominant morphology of “*Cardioceras*” *paucicostatum* (Lange) with no evidence of the typical *Cardioceras scarburgense* Young & Bird would rather suggest this interval belongs to the terminal interval within the uppermost Callovian, rather than in the basal Oxfordian.

Problems still remaining to be solved would be, besides further progress on invertebrate and micropalaeontological analyses, the definition of the basal *Cardioceras* assemblage allowing the delineation of the precise position of the Callovian-Oxfordian boundary and the eventual recognition of the basal Oxfordian Woodhamense Horizon.

## References

- ATROPS F. (Ed.) 1994. Field guide book and Abstracts. *4th Oxfordian and Kimmeridgian WorkingGroups Meeting, Lyon, France*. June 1994, 118 p., 5 pl. Lyon.
- CHAPMAN, N.D. 1999. Ammonite assemblages of the upper Oxford Clay (Mariae Zone) near Weymouth, Dorset. *Proceedings of the Dorset Natural History and Archaeological Society*, **121**, 77-100.
- FORTWENGLER, D. & MARCHAND, D. 1994 a. Stop 3.2: The Savournon Section: Upper Callovian (Lamberti Zone) to Lower Oxfordian (Mariae Zone) under “Terres Noires” facies. In: F. Atrops (ed.) 1994. Field guide book and Abstracts. *4th Oxfordian and Kimmeridgian WorkingGroups Meeting, Lyon, France*, 95-99. Lyon.
- FORTWENGLER, D. & MARCHAND, D. 1994 b. Stop 4.1: The Thuoux Section: Callovian - Oxfordian boundary under “Terres Noires” facies. In: F. Atrops (ed.) 1994. Field guide book and Abstracts. *4th Oxfordian and Kimmeridgian Working Groups Meeting, Lyon, France*, 103-106. Lyon.
- FORTWENGLER, D. & MARCHAND, D. 1994 c. Nouvelles unités biochronologiques de la zone à Mariae (Oxfordien inférieur). *Geobios Mém. Spec.*, **17**, 203-209.
- FORTWENGLER, D., MARCHAND, D. & BONNOT, A. 1997. Les coupes de Thuoux et de Savournon (SE de la France) et la limite Callovien-Oxfordien. *Geobios*, **30**, 519-540.
- PAGE, K.N. (1994). A review of the suitability of key British Callovian-Oxfordian and Oxfordian-Kimmeridgian sites as Global Stratotype Sections and Points (GSSPs) for stage boundaries (Abstract). In: Atrops F. (Ed.) 1994. Field guide book and Abstracts. *4th Oxfordian and Kimmeridgian WorkingGroups Meeting, Lyon, France*. June 1994, 15-16. Lyon.
- PAGE, K.N. *in press*. The Callovian-Oxfordian boundary in Britain: A review of key sections and their correlation with the proposed Global Stratotype section and Point for the Oxfordian in Haute Provence. *Proceedings of the 6th International Symposium on the Jurassic System*, as a special volume of *Rivista Italiana di Paleontologia e Stratigrafia* (2003).
- PAGE, K.N., HART, M.B., CHAPMAN, N.D., OXFORD, M.J., SIMMONS, M.D. *in press*. The search for a Global Stratotype Section and Point (GSSP) for the base of the Oxfordian Stage. *Geosciences in south-west England* (2003). England.

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## KIMMERIDGIAN WORKING GROUP

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### New results:

In June 2003 field studies carried in Staffin Bay, Isle of Skye by B.A.Matyja, A.Wierzbowski and J.K.Wright were completed. These studies make possible very precise recognition of the Pseudocordata/Baylei = Rosenkrantzi/Bauhini zonal boundary in the Subboreal and Boreal zonal schemes. They also enable precise recognition of the Bauhini/Kitchini zonal boundary. Both these boundaries in the studied section at Flodigarry could be considered as GSSP candidates for the Oxfordian/Kimmeridgian boundary (cf. e.g. comments by B.A.Matyja & A.Wierzbowski in ISJS Newsletter no.30, 2003). The detailed study on the biostratigraphy and ammonite faunas of the uppermost Oxfordian-lowermost Kimmeridgian at Flodigarry section, Staffin Bay, Isle of Skye, is nearly finished and it will soon be submitted to *Transactions of the Royal Society of Edinburgh*.

### Ballot:

An informal ballot (sounding out opinions of the Kimmeridgian W.G. members) was held. It involved suggestions on the possible Oxfordian/Kimmeridgian GSSP. Only thirteen answers were returned (50%) which may indicate that the problem is not easy. Of these who answered, 8 (62%) preferred the Submediterranean base of the Galar Subzone as potentially the best level for the Oxfordian/Kimmeridgian boundary. On the other hand, 5 persons (38%) indicated the base of the Subboreal Baylei Zone as the primary standard for the base of the Kimmeridgian Stage.

**Comments on ballot results:**

The first solution (base of the Galar Subzone) is in general accordance with the ICS Guidelines (e.g. looking for a universal boundary defined by the GSSP, selecting a GSSP according to its correlation potential, and not historical value, looking for the section fulfilling basic requirements for detailed studies – mostly by representing the continuous succession of deposits). The base of the Galar Subzone could be selected because it corresponds well to the Bauhini/Kitchini zonal boundary in the Boreal Succession, and thus it is recognizable in most of the Boreal Realm; selection of the Galar Subzone is also in accordance with the general importance of the Submediterranean Succession for global correlations.

On the other hand, placing of the Oxfordian/Kimmeridgian boundary at the base of the Baylei Zone, and especially at the base of the Densicostata horizon (as interpreted by the majority of those indicating the second solution) is supporting the “Primary Standard Chronostratigraphical Kimmeridgian” after the Subboreal ammonite succession recognized in the Dorset sections. Such interpretation means also that “the Submediterranean secondary standard, being independently defined by its base, should be also independently named” (e.g. Crussolien), and what is an obvious consequence “a change of name for the secondary standard stage would present also a good opportunity to redefine its lower boundary more closely in line with what is now believed to be a closer correlation with the primary standard” (J. Callomon in a letter to the members of W.G.; see also this Newsletter, p. 21). Defining the base of the Kimmeridgian at the base of the Baylei Zone – the closest level of the Submediterranean Succession would be the base of the Hauffianum Zone (which should be treated as an independent Zone, and included together with the Planula Zone into the Submediterranean “secondary standard”).

Although the general correlation of the Submediterranean, the Subboreal, and the Boreal zonal schemes is rather clear, some additional studies in parts of the Submediterranean Succession seem necessary. These should include the detailed documentation of the Submediterranean ammonite succession in the still stratigraphically poorly known interval from the upper part of the Hypselum Subzone to the Bimmamatum Subzone. The studies should involve also the Galar Subzone, an interval especially important for selecting the Oxfordian/Kimmeridgian boundary. These studies could also yield some additional collections of Subboreal/Boreal ammonites, enabling more precise correlation between the Submediterranean and the Subboreal/Boreal zonal schemes. Then, a final decision on the Oxfordian/Kimmeridgian boundary should be made easier than it is now.

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**TITHONIAN WORKING GROUP**

Federico OLORIZ, *Convenor and Günter*  
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**KI-TI boundary news:**

Since the Symposium volume of the Jurassic meeting in Sicily has only just been published, we still have to wait for the important results, including those dealing with Kimmeridgian and Tithonian stratigraphy, e.g. the presentation of the Fornazzo section in W Sicily.

The presentation of the French sections of Canjuers and Crussol is still in preparation (F. Atrops, G. Schweigert, J. Ogg, and others). We hope to finish the study this year so that it should be accessible for the next Working Group meeting scheduled for May/June 2005 in Stuttgart, Germany (as a joint meeting with the Oxfordian/Kimmeridgian group). An earlier date for the meeting, planned for 2004, was not possible because it was not in accordance with other scientific group activities in Stuttgart.

**Further activities:**

Very interesting Kimmeridgian/Tithonian boundary sections in Tunisia dated by means of ammonites have been studied by Enay, Hantzpergue, Soussi & Mangold and will be published.

In Russia, there are further activities to report by V. V. Mitta and M. Rogov (Moscow) studying Volgian sections and ammonites.

Very late Kimmeridgian ammonites including some *Hyboniticeras* were collected from the Imiadani Group of SW Japan by M. Takei, Niigata.

In southern Spain, fine biostratigraphy and taphonomy from horizons encompassing the Kimmeridgian/Tithonian boundary are in progress within the research framework of project BTE2001-3029, which has been developed by F. Olóriz and collaborators. New data will be available during 2005.

**New literature:**

References of new papers concerning K/T boundary, Tithonian stratigraphy or containing information on these topics are listed below. These papers are only those that have been communicated to the Convenor or to the Secretary.

ROGOV, M. A. 2003. Changes in the latest Kimmeridgian-Middle Volgian molluscan faunas of the Russian Platform and Siberia versus sea level change, paleoclimate and regional tectonic patterns. In: Danelian, T. et al. (eds.): *Paléocéanographie du Mésozoïque, Séance spécialisée de la SGF*, 10-11 juillet 2003, p. 38; Paris.

SCHERZINGER, A. & SCHWEIGERT, G. 2003. Ein Profil in der Usseltal- und Rennertshofen-Formation der südlichen Frankenalb (Unter-Tithonium). *Zitteliana*, A, 43: 3-17, 6 figs., 4 pls.; Munich.

SCHLÖGL, J. 2002. Sedimentology and biostratigraphy of the “ammonitico rosso” deposits in the Czorsztyn Formation of the Czorsztyn Unit, Pieniny Klippen Belt (Western Carpathians,