



International Subcommission on Jurassic Stratigraphy

6th INTERNATIONAL SYMPOSIUM
ON THE
JURASSIC SYSTEM

Mondello, September 16 - 19, 2002

ABSTRACTS
AND
PROGRAM

Edited by LUC A MARTIRE



*Volume printed with the financial support
of the Universities of Palermo and Torino*



Radiolarian fossils of Late Jurassic to Early Cretaceous age have also been reported from fine-grained clastic sediments of the **Torinosu** Group (e.g., Yao, 1984, Matsuoka and Yao, 1985; **Ishida**, 1998). Recently we found several ammonite specimens from the **Imaidani** Group, an equivalent sequence of the Torinosu Group in western **Shikoku**. They include *Anavirgatites* sp., *Hybonoticer* cf. *hybonotum*, *Hybonoticer* aff. *mundulum*, *Hybonoticer* sp. and *Taramelliceras* sp.

The **Kogoshio** Formation of the **Shishiori** Group is uppermost Jurassic - lowest Cretaceous shallow marine sediments distributed in South **Kitakami** Massif, NE Japan. Our recent research added **radiolarian** occurrence records to the previously known data by **Taketani** (1987) and Nara et al. (1994).

MAIN BIOTIC AND ISOTOPIC CHANGES DURING THE PLIENSCHACHIAN, LOWER JURASSIC, IN THE UMBRIA-MARCHE BASIN (CENTRAL ITALY)

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Hemipelagic carbonates of the Corniola unit represent a continuous sedimentary record of the evolution of the **Umbria-Marche** basin (Central Italy) during the **Sinemurian-Pliensbachian** time interval. **Nannofossil** and ammonite calibrated biostratigraphy, together with microfacies evolution, frame the carbonate stable isotopes events into a precise **biostratigraphic** sketch. The Lower Jurassic **palaeoceanography** of the Mediterranean **Tethys** is herein approached through the integration of calcareous **nannoplankton** and stable isotopes data (Carbon and Oxygen).

Nannoplankton speciation and extinction events and ammonite turnovers show strong correlation with the negative and positive $\delta^{13}\text{C}$ excursions and with sea-level variations, also testified by changes in microfacies. Major **palaeoceanographic** events during the Lower Jurassic induced changes in the marine bicarbonate reservoir, which tie together the evolutionary patterns of **phytoplankton** and **nektonic** organisms, and the productivity of the main carbonate factories. Such changes are well emphasised by carbon isotopic events.

THE FLODIGARRY SECTION (STAFFIN BAY, ISLE OF SKYE) A POSSIBLE GSSP CANDIDATE FOR THE OXFORDIAN/KIMMERIDGIAN BOUNDARY AND ITS SUBBOREAL/BOREAL AMMONITE SUCCESSION

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The sections in **Staffin** Bay on the Isle of **Skye** and especially where best developed on the shore at **Flodigarry**, show a very complete Boreal and Subboreal ammonite succession, and hence form a natural link between the Subboreal and Boreal bioprovincial areas. A detailed study of the Flodigarry sections by the authors in association with H. **Tykozeński**, N. Hogg, S. Lange and J. Bello, sampled from bed 33 (upper part) to bed 45 of the standard scheme of Morton & Hudson (1995),

corresponding to the *Pseudocordata* Zone (Subboreal), and upper *Regulare* to *Rosenkrantzi* zones (Boreal) below, to the *Baylei*-lowermost *Cymodoce* zones (Subboreal) and the *Bauhini*-lower *Kitchini* zones (Boreal) above).

Of the **biostratigraphic** boundaries recognised in this section, the following two may be considered as having the greatest potential as the candidates for placing the **Oxfordian/** Kimmeridgian boundary:

A level placed at around 1-1.5 m below bed 36. This marks the first appearance of ammonites of the genus *Pictonia* which is characteristic of the *Baylei* Zone of the Subboreal lowermost Kimmeridgian, as well as the first appearance of *Amoeboceras* of the *A. bauhini* group (subgenus *Plasmatites*), typical of the *Bauhini* Zone of the Boreal lowermost Kimmeridgian. This level is thus concordant with the traditional interpretation of the **Oxfordian/Kimmeridgian** boundary in the Boreal and Subboreal areas, but it is considerably lower than is normally taken within the **Submediterranean** successions, coming within the *Bimammatum* Zone at a level which has not to date been precisely placed, but which probably lies within the *Bimammatum* Subzone.

A level placed in the upper part of bed 41, at around 4.6 to 5 m below bed 44. This boundary lies between the Boreal *Bauhini* and *Kitchini* zones, and marks the first appearance of *Amoeboceras* (*Amoebites*) spp., and thus can be defined clearly within Boreal successions. However, this level is difficult to place precisely in the Subboreal ammonite succession as it lies in the upper part of the *Baylei* Zone, and is not marked by any significant faunal change. In contrast, this level has great correlation value in Submediterranean ammonite successions as it corresponds to the base of the *Galar* Subzone of the *Planula* Zone.

The **Flodigarry** section is one of the most promising GSSP candidates for the **Oxfordian/** Kimmeridgian boundary and the only one in **Subboreal/Boreal** areas fulfilling the requirements of the ICS Bureau for global **chronostratigraphic** standards. Nevertheless, a final agreement on the placing of a standard **Oxfordian/Kimmeridgian** boundary and the consequent final choice of GSSP, requires further detailed studies of the Submediterranean successions to confirm **inter-bioprovincial** correlations.

References

Morton, N. & Hudson, J.D. (1995) in: Field geology of the British Jurassic (ed. P.D.Taylor), pp. 209-80. Geological Society, London.

A PROPOSAL FOR THE GLOBAL BOUNDARY STRATOTYPE AND POINT (GSSP) OF THE PLIENSCHACHIAN (LOWER JURASSIC) AND DEFINITION OF THE SINEMURIAN-PLIENSCHACHIAN BOUNDARY

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The compilation of the world data around the **Sinemurian-Pliensbachian** showed poor precise information at this boundary. This fact was confirmed by the data recorded from the specialists of this period. The little number of potentially good section is a important problem and our work was mainly a process of elimination. In fact only one profile points out a continuous stratigraphic sedimentation