

Report on the 3rd international Workshop on the standard Lower Cretaceous ammonite zonation of the Mediterranean region

Rapporto sul 3° Workshop internazionale sulla zonazione standard ad ammoniti del Cretaceo inferiore della regione Mediterranea

PHILIP J. HOEDEMAEKER(1), FABRIZIO CECCA (2) (Reporters) and EMIL AVRAM (3), MIGUEL COMPANYY (4), GÉRARD DELANOY (5), ELISABETTA ERBA (6), MOHSSINE ETTACHFINI (7), PAOLO FARAONI (8), MIKHAIL V. KAKABADZE (9), GIOVANNI LANDRA (6), AGOSTINO MARINI (10), LUCIA MEMMI (11), GIOVANNI PALLINI (12), PETER F. RAWSON (13), PIERRE ROPOLO (14), JOSÉ SANDOVAL (4), JOSÉ M. TAVERA (4) & Zdenek VASICEK (15)



IGCP Projects
343: Stratigraphic Correlations Basins of Peritethyan
362: Tethyan and Boreal Cretaceous

The third international Workshop on the standard Lower Cretaceous ammonite zonation of the Mediterranean region was held in Piobbico (Italy) from 5 to 8 July 1994. It was organized by F. CECCA and G. PALLINI in cooperation with the Town of Piobbico.

The internationality of the workshop was good; participants of 10 countries attended the meeting: Morocco, Tunisia, Spain, Italy, France, England, The Netherlands, Czech Republic, Rumania and Georgia.

This 3rd international Workshop was organized in the framework of IGCP Projects 362 "Tethyan and

Boreal Cretaceous" and 343 "Stratigraphic correlations of Peri-Tethyan basins". Because the first two workshops were held in the framework of IGCP Project 262 "Tethyan Cretaceous correlation", a change of Chairman was necessary. Dr. Philip J. HOEDEMAEKER was reelected as Chairman for this international Working Group and Dr. Peter F. RAWSON was elected as vice-chairman. The connection between Tethyan and Boreal ammonite zonations is thus assured. Of course, correlations with austral Lower Cretaceous ammonite zones will not be excluded from the discussions.

(1) Nationaal Natuurhistorisch Museum, Leiden, The Netherlands

(2) Servizio Geologico Nazionale Largo S. Susanna 13, I-00187 Roma, Italy

(3) Institute of Geology and Geophysics, str. Caransebes 1, 78 344 Bucuresti, Rumania

(4) Dpt. Estratigrafia y Paleontologia Facultad de Ciencias-Universidad de Granada, Poligono Universitario Fuentenueva, 18002 Granada Spain

(5) Muséum d'Histoire Naturelle, 60 Bd. Risso, 06300 Nice, France

(6) Università di Milano, Dip. Scienze della Terra, via Mangiagalli 34, I-20133 Milano, Italy

(7) Département de Géologie Faculté de Sciences, Université Caddi Ayyad, Bd. Prince Moulay Abdellah, B. P.: S. 15 - Marrakech, Morocco

(8) via Secchiano 16, I-61043 Cagli, Italy

(9) A. Djanélidze Geological Institute, Academy of Sciences of Georgian Republic, Z. Rukhadze str. 1/9, 380093 Tbilisi, Georgia

(10) via Venezia 42, I-61043 Cagli, Italy

(11) Ministère de l'Economie Nationale Direction Générale des Mines 17, Av. Khereddine Pacha, 1002 Tunis, Tunisia

(12) Università "La Sapienza", Dip. Scienze della Terra, piazzale Aldo Moro 5, I-00185 Roma, Italy

(13) Dept. of Geological Sciences, University College, Gower Street, London WC1E 6BT, United Kingdom

(14) Centre d'Etudes Méditerranéennes, 60 Bd. Risso, 06300 Nice, France

(15) Katedra geologie a mineralogie VSB, tr. 17 listopadu, CZ-708 93 Ostrava-Poruba, Czech Republic

Tab. 1 - Ammonite zonation for the Mediterranean Lower Cretaceous as defined during the Mula Workshop (HOEDEMAEKER & COMPANY, 1993).
 - Zonazione ad ammoniti per il Cretaceo inferiore mediterraneo definita nel Workshop di Mula (HOEDEMAEKER & COMPANY, 1993).

STAGES		ZONES	SUBZONES	HORIZONS
ALBIAN	upper	S. (S.) dispar	S. (S.) dispar	
			S. (F.) blancheti	
		M. inflatum		
	middle	E. lautus		
		E. loricatus		
		H. dentatus	H. spathi L. lyelli	
lower	D. mammillatum			
	L. tardefurcata			
APTIAN	upper	H. jacobi		
		A. nolani	D. nodosocostatum	
	middle	P. melchioris		
		E. subnodosocostatum		
	lower	D. furcata		
		D. deshayesi		
D. weissii				
	D. tuarkyricus			
BARREMIAN	upper	M. sarasini		H. ridzewskyi
		I. giraudi		
		H. feraudianus		
		H. sartousiana		
		A. vandenheckii		
	H. caillaudianus			
lower	S. nicklesi		N. pulchella	
	S. hugii			
HAUTERIVIAN	upper	P. angulicostata <i>auct.</i>	P. catulloi P. angulicostata <i>auct.</i>	
		B. balearis		
		"P. ligatus"		
		S. sayni		C. cruasense
	lower	L. nodosoplicatum		
		C. loryi		O. (J.) jeannoti C. loryi
	A. radiatus			
VALANGINIAN	upper	N. (T.) pachydicanus	H. trinodosum	N. (T.) callidiscus C. furcillata O. (O.) nicklesi
		S. verrucosum		
		B. campylotoxus		
	lower	T. pertransiens		
		T. otopeta		
BERRIASIAN	upper	F. boissieri	T. alpillensis B. picteti	
			M. paramimounum	
			D. dalmasi	
	middle	T. occitanica	B. privasensis	
			T. subalpina	
	lower	B. jacobi		

The main result of the scientific discussions is that the attendants did not change the zonal scheme adopted during the 2nd Workshop in Mula (Spain) in 1992 (HOEDEMAEKER & COMPANY, 1993). This scheme is reproduced here in Table 1. This means that a certain stability in standard ammonite zonation has been reached. This is a good sign because the zonation would lose credibility if it is changed every two years. The zonation adopted by the Workshop will be used on the new sequence-stratigraphic Mesozoic-Cenozoic cycle chart, which is now in press in a Special Publication of the Society of Economic Paleontologists and Mineralogists (SEPM). Slight corrections are necessary in the Lower Barremian and Lower Valanginian, but the studies in which these corrections are proposed should be published first.

During the Workshop P. RAWSON presented his correlation between the pre-Aptian Mediterranean and Boreal zonation. We refer the reader to his paper (RAWSON, this volume).

The majority of the attendants agreed that the ammonite biochronozones should be used to define Lower Cretaceous stages; ammonites still provide the finest stratigraphic resolution in the Mesozoic erathem

(down to 100.000 years). If we stop with this well-tested and more than a century old tradition, the comparison with older literature becomes almost impossible. Worldwide correlation can best be done with magnetostratigraphy, or with an "integrated stratigraphy" approach.

The next workshop is planned for 1997 in England where the ammonite zonation of the boreal and possibly austral Lower Cretaceous will be discussed and correlated with the slightly corrected Mediterranean standard.

REFERENCES

- HOEDEMAEKER J., COMPANY M. (Reporters) and AGUIRRE-URETA M. B., AVRAM E., BOGDANOVA T. N., BUIOR L., BULOT L., CECCA F., DELANOY G., ETTACHINI M., MEMMI L., OWEN H. G., RAWSON P. F., SANDOVAL J., TAVERA J. M., THIEULOY J.-P., TOVBINA S. Z. & VASICEK Z. (1993) - *Ammonite zonation for the Lower Cretaceous of the Mediterranean region; basis for the stratigraphic correlations within IGCP-Project 262*. *Revista Espanola de Paleontologia*, **8** (1): 117-120, 1 tab., Madrid.
- RAWSON P. F. (this volume) - The "Boreal" Early Cretaceous (Pre-Aptian) ammonite sequences of Nw Europe and their correlation with the Western Mediterranean faunas.