

# SUBCOMMISSION ON NEOGENE STRATIGRAPHY

## ANNUAL REPORT 1995

### 1. NAME OF CONSTITUENT BODY

Subcommission on Neogene Stratigraphy (SNS)

### 2. OVERALL OBJECTIVES

The task of the Subcommission is to clarify and precise the stratigraphic subdivision of the Neogene by means of defining Global Stratotype Sections and Points (GSSP) of Systems, Series and Stages. Since stability in stratigraphic nomenclature is a must, a consistent international usage of a chronostratigraphic unit for several years (more than 15) is considered a good test. Postal ballots for the definition of a GSSP, now firmly requested by ICS, are proposed when the problem is considered mature, and a wide consensus is predictable.

### 3. ORGANIZATION

SNS is a Subcommission of the International Commission on Stratigraphy. According to our records, it has been created in 1971. It was in Lyon - during the IV Congress on Mediterranean Neogene Stratigraphy - that professor V. Menner, Chairman of ICS, announced that a Neogene Subcommission was set up. The Assembly proposed prof. Raimondo Selli as Chairman. No vice-Chairman and no Secretary were elected, and no major activity followed. Starting from 1980 (IGC Congress in Paris) chairman was dr. Jan Senes, with prof. Steininger as vice-chairman and dr. Halmai as secretary, until 1989.

From 1989 on, chairman is prof. Maria Bianca Cita, vice-chairman prof. Steininger and secretary dr. Halmai.

The bureau of SNS met in Vienna on April 26, 1995 and a postal ballot was launched for the election of the new bureau, which will take over in 1996. Elected chairman is prof. Domenico Rio, vice-chairman elected are dr. Fred Roegl, prof. Tsuchi and prof. Zachariasse. The first-vice-chairman and the secretary will be decided at a later date.

SNS has 30 voting members and 20 corresponding members. Elections of voting members as replacement of some vacancies were made during a business meeting of SNS held on September 6, 1995, during the X Congress of the Regional Committee for Mediterranean Neogene Stratigraphy. New voting members are John van Couvering, Johan Meulenkamp, Alessandro Montanari, Jan Backmann, Alan Beu, Fred Rogl.

The only formal Working Group of SNS, actually attached to SNS after a re-organization of ICS, is the Paleogene/Neogene Working Group (chairman F. Steininger). A postal ballot among SNS and SPS for the definition of the Neogene GSSP in the Lemme Valley (Carrosio section) was approved with a very large majority by both subcommissions, and is now under postal ballot by ICS. The Working Group should be disbanded after the completion of the bureaucratic procedures.

Other Working Groups (on Miocene/Pliocene boundary, on Pliocene time-scale, on Transcasian correlation) are considered informal, although in some instances they have a formal membership and a precise mandate.

A Workshop of the Miocene/Pliocene WG was held during the X Congress of RCMNS in Bucarest (see later on, under accomplishments).

Of the four Regional Committees (on Mediterranean, Atlantic, Pacific and Nordic Neogene Stratigraphy), the difference in performance is even greater than before, with the Pacific and Mediterranean being by far the most active. A re-organization of the entire structure is foreseen.

#### 4. EXTENT OF NATIONAL/REGIONAL/GLOBAL SUPPORT OF PROJECTS

The present level of funding of the Subcommittee by IUGS through ICS is very low: the real expenses met to carry out the reported activities is one to two orders of magnitude higher. There is no official funding of SNS besides IUGS (through ICS), which prevents from giving more visibility to the progress and the accomplishments, that are only possible by the dedicated efforts of some scientists of high international standard.

#### 5. INTERFACE WITH OTHER INTERNATIONAL PROJECTS

SNS interacts with two major international projects by means of its bureau, voting members and/or corresponding members,

a) The International Geological Correlation Program (IGCP) and

b) the Ocean Drilling Program (ODP).

a) of the various IGCP projects presently funded, those actively interfacing with SNS are

IGCP 326 (1992-96) "Oligocene/Miocene Transition in the Northern Hemisphere" where vice-chairman prof. Friz Steininger is actively working,

IGCP 329 (1992-96) "Neogene of the Paratethys", which is an ideal continuation of IGCP 25, closely related and interconnected with RCMNS,

IGCP 355 (1993-97) "Neogene Evolution of Pacific Ocean Gateways", the successor of IGCP 246, closely related to RCPNS.

b) the Ocean Drilling Program is continuing the exploration of the ocean floor and provides a great wealth of new data on integrated stratigraphy of Neogene continuous marine sections from various latitude from both the open ocean and marginal seas. During 1995, three legs (expeditions of two consecutive months) were of paramount importance for the Neogene Stratigraphy: Leg 160 in the eastern Mediterranean, Leg 161 in the Western Mediterranean and Leg 162 in the northern North Atlantic. All three expeditions were extremely successful: Legs 160 and 161 for providing continuous successions in the type area for the Plio-Quaternary and Late Miocene (see later on) and Leg 162 for paleoceanographic issues.

#### 6. ACCOMPLISHMENTS AND PRODUCTS GENERATED IN 1994

a) creation and dissemination of Neogene Newsletter n.2, which contains the Annual Report of SNS for 1994, a number of informative and updated articles dealing with Neogene stratigraphy and principles, reports of Neogene congresses, SNS business meeting, Bureau meeting, Workshop on the Miocene/Pliocene boundary. 200 copies have been distributed so far.

b) postal ballot on the Gelasian (upper Pliocene) GSSP. Launched by the bureau meeting in April, it has been approved by a large majority (80%) of the voting members. A report is in preparation for distribution to ICS.

c) international conference on the "Biotic effects of the Messinian event on the circum-

Mediterranean" (Benghazi, Libya, January 14-18, 1995) organized by RCMNS and other international bodies.

d) Symposium 24 of INQUA (Berlin, August 1995), organized by M.B.Cita, to present and discuss marine sections from southern Italy potentially usable as standard reference for the Quaternary. The symposium included also the problem of the Pliocene/Pleistocene boundary that is now being questioned by INQUA.

In Berlin SNS Chair realized that the Stratigraphic Commission of INQUA, which acts as Subcommittee for the Quaternary of the International Commission of Stratigraphy, behaves in a style that is strongly different from all the other Subcommittees of ICS, and does not follow its rules and procedures, well established and long discussed prior to being adopted. This is pointed out here as a MAJOR PROBLEM WHICH PREVENTS GOOD OR AT LEAST ACCEPTABLE COMMUNICATIONS AND MAY HAVE DESTABILIZING EFFECTS.

e) VI International Congress on Pacific Neogene Stratigraphy (Serpong, Indonesia, July 2-9, 1995); attended by 90 participants from 9 countries. Title of the Congress was "Neogene Evolution of the Pacific: biotic, climatic, oceanographic and tectonic development".

f) X International Congress on Mediterranean Neogene Stratigraphy (Bucarest, Romania, September 4-9, 1995) attended by 205 scientists from 22 countries. Several topics were treated by the Congress, from "New light on Mediterranean chronology" to "Neogene volcanism" to "Definition and chronology of major Neogene tectonic events" and others.

g) Miocene/Pliocene workshop, held during the X RCMNS Congress in Bucarest. Conveners R.H.Benson, chairman of the ad hoc WG, and M.B.Cita. Well attended, with most the protagonists of the debate actively participating to the discussion. Three candidate sections were presented: 1) the "classical" sections of southern Sicily (Capo Rossello, Eraclea Minoa) where the Miocene/Pliocene boundary has been defined, but never formally voted, at the base of the Zanclean, or at the re-establishment of open marine conditions in the Mediterranean after the Messinian salinity crisis, 2) the section of Carmona in southern Spain, facing the Atlantic, and 3) the section of Bou Regreg in Morocco, investigated in great detail in the last several years by Benson and associates.

The Carmona section was considered inadequate. The other two candidate sections are both considered adequate: the Sicilian section has the advantage of being extremely well calibrated and world-wide known, but the disadvantage of being superposed to a not fully marine succession ("Iago-mare" and "arenazzolo" units). The Moroccan section has the advantage of being fully marine throughout, but it is not so well exposed. Moreover, the GSSP proposed by Benson and co-workers is not time-equivalent with the re-establishment of open marine conditions in the Mediterranean (Pliocene transgression) after the termination of the Messinian salinity crisis, but predates it.

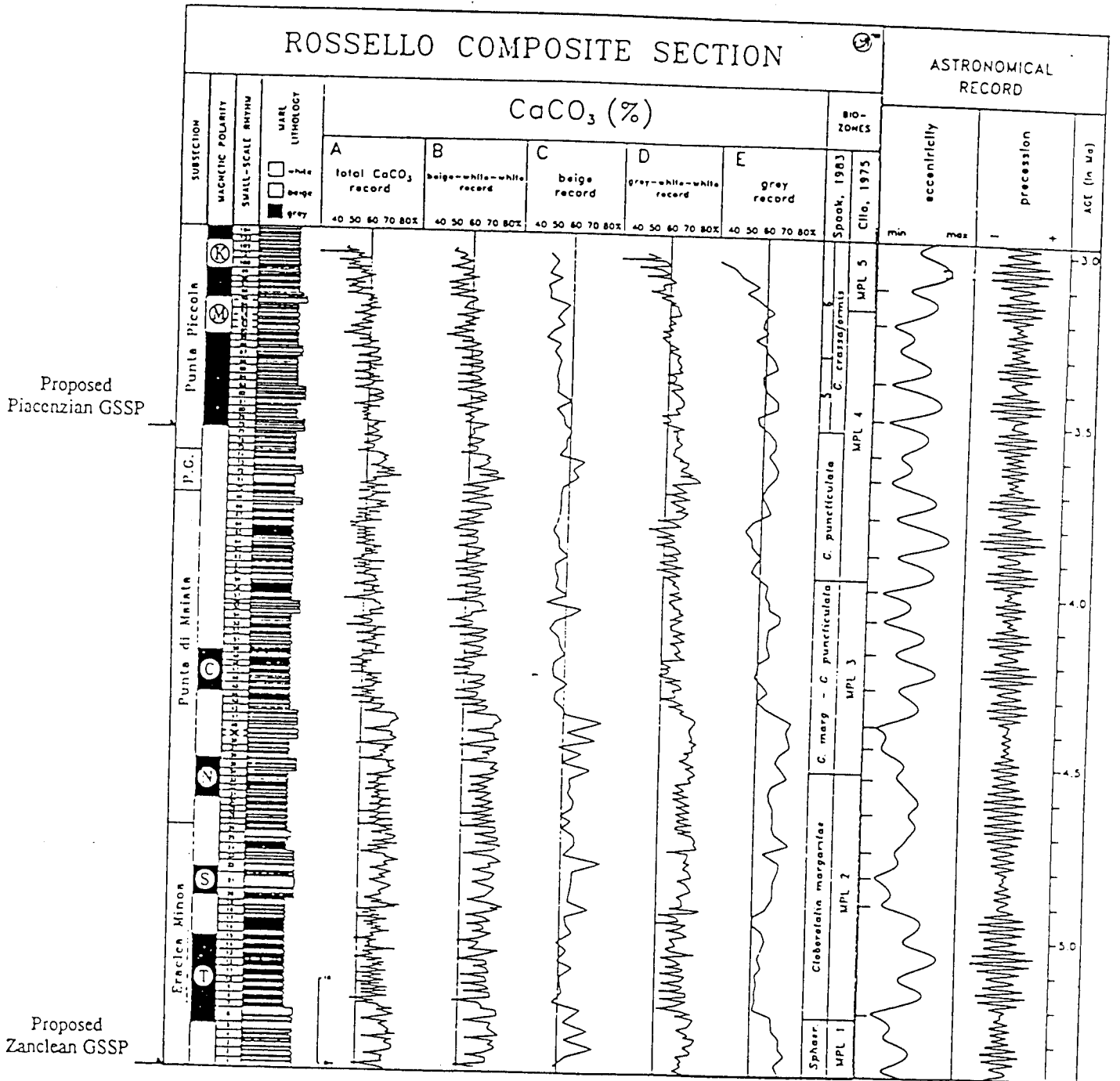
The decision was adopted to wait until detailed research now in progress (see point 7.3) on new drillholes in the eastern and western Mediterranean will prove or disprove that the Pliocene transgression was isochronous basinwide.

Meanwhile, further researches on the "quiet zone" of the Bou Regreg section will be carried out in order to substantiate the possible presence of some bioevents in this poorly exposed interval. No postal ballot will be launched until these scientific problems are solved.

## 7. WORKPLAN FOR 1996

1) Postal ballot for Piacenzian GSSP, as discussed at the SNS Business meeting in Bucarest, and presented in Neogene Newsletter n.2. The postal ballot will presumably be launched in the fall of 1995 (see enclosed frontispiece of NEOGENE Newsletter n.2).

2) Planning and participation to Symposium 1-9 "Interaction of global trends and regional events in the Neogene stratigraphic record" at the XXX IGC Congress in Beijing. Conveners are M.B.Cita and Pinxiang Wang. The Symposium is co-sponsored by SNS and by the



Classical Stages in the framework of modern high-resolution cyclostratigraphy in the Mediterranean region (modified after Hilgen and Langereis, 1989, and Hilgen, 1991)

European Consortium for Ocean Drilling (ECOD). A negotiation in progress foresees an extension of the Symposium to include the Paleocene/Eocene boundary.

3) Coordinated research on the Miocene/Pliocene boundary with reference to new drilling results of ODP Legs 160 and 161 (Mediterranean, spring-summer 1995).

4) Continuation of coordinated research focussed on late Miocene (Messinian and Tortonian) continuous marine, orbitally-tuned successions, that will hopefully allow soon the choice of GSSPS with well tested correlation potential (see enclosed frontispiece of NEOGENE Newsletter n.2).

5) Change of Bureau, substantial renewal of SNS membership; business meeting to be held during the XXX IGC Congress in Beijing; foreseen restructuring of the Subcommittee.

8. FINANCIAL STATEMENT FOR 1995 (in US dollars)

Carry-over from 1994	\$ 0
IUGS Contribution 1995	\$ 1755

The Contribution was subdivided as follows:

SNS Chair (Milan)	\$ 905
SNS Secretariat (Budapest)	" 150
RCPNS (Shizuoka)	" 200
RCMNS (Lyon/Montpellier)	" 250
RCMNS Organizing Committee X Congress-Bucarest	" 250

As of today, a financial statement was received only from RCPNS. Obviously extra-funds were necessary to carry out all the reported activities.

A. SNS Chair (Milan)

INCOME

from IUGS	\$ 905
from OTHER SOURCES	" 5645

EXPENDITURES

NEWS LETTERS N. 2 Reproduction	\$ 550
Editorial/Secretarial Assistance	" 2500
Travels (to Vienna, Berlin, Bucarest)	" 3000
Communication	" 500

---

TOTAL \$ 6550

INTERNATIONAL UNION OF GEOLOGICAL SCIENCES

INTERNATIONAL COMMISSION ON STRATIGRAPHY

SUBCOMMISSION ON NEOGENE STRATIGRAPHY SNS

CHAIRMAN M. B. CITA  
SECRETARY J. HALMAI

# NEOGENE NEWSLETTER N. 2

SYSTEM	SERIES	STAGES			
NEOGENE	PLIOCENE	L	GELASIAN	<i>GSSP voted</i>	
		M	PIACENZIAN		<i>GSSP to be voted</i>
		E	ZANCLEAN		
	WG	MIOCENE	L	MESSINIAN	<i>Workshop completed</i>
	L		TORTONIAN	<i>Workshop planned</i>	
	M		SERRAVALLIAN		
	M		LANGHIAN		
	E		BURDIGALIAN		
	E		AQUITANIAN		
	WG				<i>GSSP voted</i>

MILANO, SEPTEMBER 1995

B. RCPNS

INCOME

from SNS	\$ 200
from OTHER SOURCES	" 2100
<b>TOTAL</b>	<b>\$ 2300</b>

EXPENDITURE

Communication	\$ 300
Travel	" 2000
<b>TOTAL</b>	<b>\$ 2300</b>

**TOTAL REPORTED EXPENDITURES**

A	\$ 6550
B	" 2300
<b>TOTAL</b>	<b>\$ 8850</b>

TOTAL REPORTED EXPENDITURES	\$ 8850
TOTAL INCOME from IUGS	\$ 1755

**EXCESS REPORTED EXPENDITURES over IUGS INCOME \$ 7095**

**NOTICE:** If RCMNS will submit a late cost statement, this will be forwarded to ICS Chairman with the request to modify accordingly the SNS Financial Statement

**BUDGET FOR 1996 (in US dollars)**

INCOME

Request from Chair (also for RC & WG)	\$ 6000
Request from RCPNS (enclosure)	" 1500
Request from RCMNS (supposed)	" 2000
<b>TOTAL</b>	<b>\$ 9500</b>

Carry over from 1995 \$ 0

ANTICIPATED EXPENDITURES

Organization Symposium 1/9- Beijing 1996	\$ 2000
Preparation & distribution of News Letter N.3	" 3000
Travel	" 3500
Communication	" 1000
<b>TOTAL</b>	<b>\$ 9500</b>

ALLOTTMENT REQUESTED from IUGS/ICS for 1996

\$ 3500

Name of Chair Person: Maria Bianca CITA

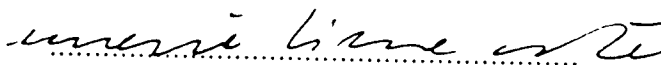
Address: Dipartimento di Scienze della Terra, Università di Milano  
Milano, Italia, via Mangiagalli 34

Phone: 0039-2-23698249

FAX: 0039-2-70638261

Date, October 20 1995

Signature of Chair Person

A handwritten signature in cursive script, appearing to read "Maria Bianca Cita", written over a dotted line.