

COMMENTS SNS MEMBERS

Comments Dennis Kent (in favor of Neogene proposal):

I strongly favor a Neogene that extends up to the present and certainly am opposed to the Quaternary decapitating it. The Quaternary would be best treated in its own column, perhaps buttressed by the Tertiary, and its base placed where advocates think most useful but it is not necessary that the Quaternary corresponds to the Pleistocene (e.g., base could be at 2.6 Ma, at the Gauss/Matuyama boundary, which would be convenient for correlation). The Cenozoic geomagnetic polarity time scale was developed from marine magnetic anomalies and is closely tied to marine-based chronostratigraphy (now including orbital tuning in long continuous marine sections) and thus fits naturally with a Neogene that is continuous to the present rather than a truncated concept.

Comments Bill Berggren (in favor of Neogene proposal):

The Neogene MUST NOT be truncated by an overlying Quaternary. The Quaternary and Neogene are different categories – the Q being a climatostratigraphic unit, the Neogene being a chronostratigraphic unit. The base of the Calabrian cannot be lowered to 2.6 Ma inasmuch as it would overlap with the underlying Gelasian unless it is placed/included as defined rigorously as a chronostratigraphic unit and considered as a subsystem/subperiod or superseries/supersystem; or less desirably as a subera/suberathem. Failing this the alternative of invoking the principle of *non overlapping magesteria* (NOMA) may be appropriate. See accompanying MS by Aubry et al (submitted to Stratigraphy) for further details.

Comments Silvia Iaccarino (in favor of Neogene proposal):

Comments Neogene: except for the point 4

I do not see the necessity to eliminate the Middle Pliocene which was distinguished only few years ago. In fact, when the Gelasian was defined Rio and others re-subdivided the Pliocene in lower, middle and late. The new bipartition could create some confusion because in the past the Pliocene was already subdivided in lower and upper and the stages were Zanclean and Piacenzian.

I think that we have to retain as much as possible stability in the stratigraphic subdivision

Comments Yuri Gladenkov (status quo):

20-10-2008

Dear Frits,

This is to answer your letter of October 3, 2008. First of all, I would like to note that there are three, not two, views. They are as follows: (1) "The extended(long) Quaternary" with the lower boundary at 2.6 Ma (Ph. Gibbard and others); (2) "The extended (long) Neogene" without the Quaternary as a system (F. Hilgen and others); (3) The Neogene and Quaternary as systems and their boundary is at 1.8 Ma. These views were discussed at the 33 IGC in Oslo, August 2008. The third view was supported by representatives of some national stratigraphic committees (USA, Dr. R. Orndorff; Italy, Prof. P. Vai; Russia, Prof. Yu. Gladenkov; Austria, Prof. P. Smolka).

I have sent you, Ph. Gibbard, M. Cita, F. Gradstein and other persons "The memorandum" prepared by Russian geologists in 2005, the resolution of the special joint meeting of the Neogene and Quaternary commissions of the Russian Stratigraphic Committee in 2007, and the letter presenting my personal position in March 2007.

Our proposals were:

- 1) to consider the Quaternary as a system;
- 2) to draw its lower boundary at 1.8 Ma;
- 3) to work out the stage structure of the Quaternary;
- 4) to postpone the decision for five or more years.

In this connection I would like to suggest that (1) the voting will be postponed or (2) three, not two, views will be put for voting.

I have got an impression about an unnecessary hurry in taking debatable decisions and ignoring the opinions of national stratigraphic committees. I do not mention the violation of some formal procedures. This may lead to discreditation of the ICS and new difficulties. Now it is very important to understand that we can make a mistake and to lose the common sense in this "battle".

Attached is my letter of 2007.

I would ask you to distribute it among the SNS members.

Best regards,

Yuri

Letter Yuri Gladenkov 2007:

Dear colleagues,

Dear Frits, Marie-Pierre, Bill, John, Brian, Fritz,

With great interest I read your splendid Neogene essay. Before informing my opinion, I would like to note the following. It seems sometimes our discussions on stratigraphic scales suffer from a lack of wisdom. Stratigraphic scales must be stable (retaining the “historical” roots and traditions) and convenient (having been long used in the geological practice). We should introduce less subjectivity, ambition, and bureaucracy into scale revision of any kind. Results of bureaucracy and subjectivity, unwillingness to remember long-standing traditions and origin of stages and systems are well illustrated by the Lower Paleozoic scale in which many stages have completely disappeared! The situation was aggravated by enthusiasm in definition of GSSP to the detriment of studying sections of stages (as H. Hedberg insisted) but not only their boundaries. As a consequence, some GSSP “jump” in stratigraphic succession from one place to another: from Europe to America, further to Australia, and then in Asia and so on. Thus, in many cases “golden spikes” have been driven in, but stages and their characteristics disappeared. This is nonsense for geology and stratigraphy because historical geology also disappears.

Let the scales be stable. Slight differences mostly of academic character (for instance, usage of terms Tertiary and Quaternary) can be always discussed and agreed, without complications and revolutions. I am for revising the established scales as little as possible, excluding for correction of previous evident mistakes (for instance, the reasonable elimination of the Helvetian Stage) or filling gaps in the scale.

I deeply regret that the violent disputes on the Neogene and Quaternary problems have somewhat academic or formal character with introduced ambitious logics. Certainly, disputes are necessary but wisdom is also needed. We should ask ourselves: will this be better for geology or more pleasant for ourselves?

I know many colleagues in Cenozoic studies for long time and feel sincere respect toward them. It is interesting and useful to discuss disputable problems with them. I am sure the disputes will lead us to some weighted conclusions, but I am against any hurry. Recently the incorrect “unilateral dictate” from the Quaternary community has led to aggressive suggestions to revise the Neogene scale and to complications in classification and nomenclature. On the other hand, a proposal to include the Quaternary into the Neogene was put forward. In both cases a tendency to revise the scale is observable. Certainly the Quaternary is the continuation of the Pliocene. Certainly the Neogene together with the Quaternary represent a peculiar stage in the paleobiosphere evolution, but the Quaternary has definite specific features and there are many problems that may arise disputes (particularly, among persons studying different (marine and terrestrial) fossils, paleoclimatologists, geochemists and others). For me personally, it is more convenient to begin the Neogene from the Oligocene because the Cenozoic boreal fauna was formed in the Oligocene and diversified during the Neogene and Quaternary. However I shall not insist on lowering the Neogene boundary down to the level of 34 Ma because the existing scale does not prevent making scientific conclusions. It is one thing to establish different type stages in the paleobiosphere evolution (all researchers can suggest their own versions) and quite another matter is to use the scale which met requirements of geological practice for more than 100 years. We need the living scale. It needs to be refined and added (with great caution) if there are gaps in it (the current task is to outline Quaternary “stages”).

It may be of interest for you to learn the opinion of Russian geologists on the problems of the Quaternary and the Neogene-Quaternary boundary. Recently I inform S. Finney about it suggesting to discuss the problems during the 33 Session of the International geological congress (see attachment).

Dear colleagues, I am sorry if I look as a conservator, but you know I am always willing to participate in open discussion.

With best wishes,
Yuri

Comments Yuri Gladenkov (19-11-2008)

Comments: I do not consider two proposals presented (Quaternary and Neogene) to reflect all views. They restrict the discussion of the problems by calling us to take the opposite standpoints. Earlier I suggested to put on vote the third view, i.e., to retain the present scopes of the Neogene and Quaternary. Its absence in the voting ballot looks undemocratic. In this case the hurried formal voting on two opposite views (incorrect, in my opinion) may damage the common sense (this may be a bad precedent in case of revision of the entire International Stratigraphic Scale) and violate a number of previously adopted resolutions and recommendations of the ICS and IUGS (1948, 1985, and others). In addition, the views of some national committees which conduct geological mapping of large territories (Italy, the USA, Russia, and others) have not been taken into account. These committees are against the presented ideas, because they neither help to solve the scientific problem nor facilitate geological practice.

I repeat my opinion:

1. The Neogene and Quaternary should be retained as independent systems;
2. The base of the Quaternary System should be retained at 1.8 Ma; Calabrian is the lowermost stage of the Quaternary;
3. To introduce a temporary (for several years) moratorium for any decisions until some new scientific data on the problem are obtained as well as to hold on to the previous recommendations and resolutions of the IUGS and ICS.

Comments Gian Battista Vai (status quo):

Hi Frits,

now I am coming to your message.

As a defender of the coincidence of the base of the Pleistocene Series and the Quaternary chronounit standardized in the Vrica GSSP since more than a decade and lastly in Oslo, I will continue maintaining this position also for the next ballot.

Let me add a desire that all the members of the SNS be adequately informed about the result of the special meeting on this matter held at the 33d IGC in Oslo in the special session chaired by Stan Finney and John Clague and attended by both of us, before they are asked to vote.

Stan should have already written such an official report for the ICS and the IUGS.

I feel it would be interesting for many of them to know that, unlike some Geological Surveys such as Japan and Denmark, both the USA and Russian Geological Surveys, the two world largest, are sharply favoring the status quo, as well as the Italian and the Spanish Surveys.

The above is for the ballot.

Thank you in advance for this information, all the best,
Gian Battista