

# 16<sup>th</sup> INTERNATIONAL CONGRESS OF SPELEOLOGY

## Proceedings

VOLUME 1



16<sup>th</sup> INTERNATIONAL  
CONGRESS OF SPELEOLOGY



WHERE HISTORY MEETS FUTURE



Edited by  
Michal Filippi  
Pavel Bosák

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OF SPELEOLOGY**

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**Produced** by the Organizing Committee of the 16<sup>th</sup> International Congress of Speleology.

**Published** by the Czech Speleological Society and the SPELEO2013 and in the co-operation with the International Union of Speleology.

**Design** by M. Filippi and SAVIO, s. r. o.

**Layout** by SAVIO, s. r. o.

**Printed in the Czech Republic** by H.R.C. spol. s r. o.

The contributions were not corrected from language point of view. Contributions express author(s) opinion.

Recommended form of citation for this volume:

Filippi M., Bosák P. (Eds), 2013. Proceedings of the 16<sup>th</sup> International Congress of Speleology, July 21–28, Brno. Volume 1, p. 453. Czech Speleological Society. Praha.

ISBN 978-80-87857-07-6

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KATALOGIZACE V KNIZE - NÁRODNÍ KNIHOVNA ČR

International Congress of Speleology (16. : Brno, Česko)  
16th International Congress of Speleology : Czech Republic,  
Brno July 21–28,2013 : proceedings. Volume 1 / edited by Michal  
Filippi, Pavel Bosák. -- [Prague] : Czech Speleological Society and  
the SPELEO2013 and in the co-operation with the International  
Union of Speleology, 2013  
ISBN 978-80-87857-07-6 (brož.)

551.44 \* 551.435.8 \* 902.035 \* 551.44:592/599 \* 502.171:574.4/5

- speleology  
- karstology  
- speleoarchaeology  
- biospeleology  
- ecosystem management  
- proceedings of conferences  
- speleologie  
- karsologie  
- speleoarcheologie  
- biospeleologie  
- ochrana ekosystémů  
- sborníky konferencí

551 - Geology, meteorology [7]

551 - Geologie. Meteorologie. Klimatologie [7]

**Cover photos** (some photos were adjusted/cropped)

Top left – José Bidegain, on his way for the recovery Marcel Loubens' body. Author unknown. For details see the paper by A.A. Cigna.

Top right – "Walking Mammoth" – a prehistoric drawing from the Kapova Cave, Russia. Photo by O. Minnikov. For details see the paper by Y. Lyakhnitsky et al.

Bottom left – "Astronaut" David Saint-Jacques (CSA) collecting microbiological samples for the scientific programme of the ESA CAVES course. Photo by V. Crobu. For details see the paper by Bessone et al.

Bottom right – The long-legged cave centipede *Thereuopoda longicornis* – a typical species of Lao caves. Photo by H. Steiner. For details see the paper by H. Steiner.

# SIGNIFICANT “ERRORS” OF SOME THESSALONICA’S GEOLOGISTS AND ARCHAEOLOGISTS REGARDING PETRALONA CAVE

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For more than half a century Petralona cave is known mainly due to the discovery during 1960 of a human fossil skull. Its morphology revealed primitive europeoid traits, corresponding to approximately 700,000 years ago. In this concept Petralona man represents the eldest ancestor of the Europeans that used a particular pre-Acheulian Palaeolithic culture, accompanied by the first known traces of fire. The above conclusions entered into excessively strong debates for several decades, mainly by various scholars of N. Greece. According to the author’s point of view these debates are due to (and/or led to) significant “errors”, concerning even damages to the Petralona human skull, to other findings, and to the cave chambers. The lack of research and excavating permissions over the last 30 years to several scientists all over the world intensified the related problems, preventing a closer approach within an open and sincere scientific dialog.

## 1. Introductory history

Petralona Cave was incidentally discovered in May 1959, on the Chalkidiki Peninsula (Macedonia, N. Greece). It is located at an elevation of ~300 m above sea level on the western slopes of the Kalavros (Katsika) Mountain. In September 1960 an almost intact human skull was discovered in a small chamber.

Initially the fossil material was considered unstratified (mixed by running water) and of Upper Pleistocene age (~50,000–70,000 years old). In accordance with this chronology the human skull was therefore considered to be that of a Neanderthal woman, with a similar morphology to African skulls (cf. Kokkoros and Kanellis 1960; Breitingner 1964; Sickenberg 1964; Marinis et al. 1965).

“*Macedonia*” – the newspaper of Thessalonica – was the first on 18<sup>th</sup> September 1960 to report about the discovery of “Petralona man”, publishing photography of the skull.

Aris Poulianos (father of the author) was working in the same year on his PhD thesis “*The Origin of Greeks*” (its main conclusion being that there is an uninterrupted presence of the same population in the Helladic area, as well as most of the Balkans since prehistoric times) under the guidance of Academician G. F. Debetz in Moscow. Therefore and because Petralona man was indirectly connected to his thesis, A. Poulianos (1961) sent a first short note to “*Voprossi Antropologhii*”, based on the picture published in the above-referred newspaper. Also, the Petralona discovery triggered A. Poulianos return to Greece at the earliest possible time and, within the context of a huge effort to re-initiate anthropology to its motherland, he started exploring the Petralona Cave in 1965 (cf. A. Poulianos 1967, 1971). Soon he came to the conclusion that Petralona man was: (1) a male and not a female, (2) europeoid and not africanoid, (3) and belonged to the Lower to Middle Pleistocene (~700,000 years old) and not to the Upper Pleistocene, and that he therefore was (4) a prae-neanderthalian *Archanthropus* (i.e. an archaic *Homo sapiens*, also referred to as a late *Homo erectus* or even a *Homo heidelbergensis*) and not a classical Neanderthal. It is therefore the first europeoid, that practiced his own Palaeolithic culture and important for our general

understanding of the hominisation process.

The Lower to Middle Pleistocene age is based on the detailed analysis of the cave stratigraphy (34 geological layers have been excavated until today). It is also based on the study of the Palaeolithic tools, as well as the exact diagnosis of the Palaeofauna that was discovered in almost all layers. Among the fossils of extinct species such as lions, hyenas, bears, panthers, elephants, rhinos, megacerines, bison, various species of deer and equids were found, as well as 25 species of birds, 16 species of rodents and 17 species of bats. A considerable factor that helped in reconfirming the age of Petralona man contributed methods of advanced by nuclear physics. The materials used for such a purpose were bones, clay, stalagmites and ashes, the earliest traces of fire that have been lightened by human hands on Earth.

The systematic excavations of the site proceeded mainly during 1974–1983 under the auspices of the Anthropological Association of Greece (AAG – founded in 1971 by Dr. A. Poulianos), a large scientific group with 52 prominent specialists from twelve countries that was formed to support the studies. Researchers as B. Kourten (Finland), M. Kretzoi (Hungary), M. Ikeya (Japan), P. Bosak and I. Horacek (Czech Republic), G. Belluomini (Italy), A. Moigne (France), R. Murrill (U.S.A.), are among the most known authorities engaged in the studies, applying also many innovative scientific methods. The Lower to Middle Pleistocene chronological considerations were also reconfirmed by the author, while correlating Petralona with Razdolje, Stranska Skala, Mosbach, Isernia and other Lower to Middle Pleistocene sites (cf. N. Poulianos 1989).

During this same period A. Poulianos advanced his excavations, publishing dozens of articles and in 1981 he built the Anthropological Museum of the AAG next to the cave at his own expenses.

In 1989 and 1998 the author defended his two PhD theses, the first at the Florence Anthropological Institute of the State University in Italy and the second at the Prague Geological Institute of the Academy of Science.

In 1997 new catalogs of the fossils were compiled, this time in a digital form. This process was unfortunately advanced



with no state support and under tremendously adverse conditions. As a consequence N. Poulianos in 2008 wrote: “...to this digitalization purpose the most scientific effort of the Anthropological Association of Greece is directed”.

The new data were presented for the first time at the UIS Congress at Sheffield by N. Poulianos (1977), who already participated as a high school student in the Olomouc UIS Congress in 1973 (cf. Sifneos and Poulianos 1974). New data were also presented at the UIS congresses at Kentucky, Barcelona, Brasilia, Kalamos (Attica, Greece) and more recently at Kerrville, 2009 by the author (cf. also detailed bibliography at <http://www.aee.gr/hellenic/6petralona/bibliography/bibliography.html>). On the other hand almost 1,000 articles, radio and TV reports concerning the AAG contribution to Petralona cave studies have being brought to the public in Greek and other languages (cf. in [www.aee.gr](http://www.aee.gr)).

Today Petralona Cave – bejewelled with stalagmites and stalactites – is a touristic destination and at the same time constitutes an excavating site of considerable importance for many aspects regarding the passage from the end of the Lower to the beginning of the Middle Pleistocene. Prehistory, stratigraphy, palaeontology, archaeometry, palaeoecology, biostratigraphy and palaeoanthropology are the main topics under continuous investigation. These topics attracted a broad international interest and stimulated extensive studies of the site, leading to manifold discussions especially regarding the chronology of the cave.

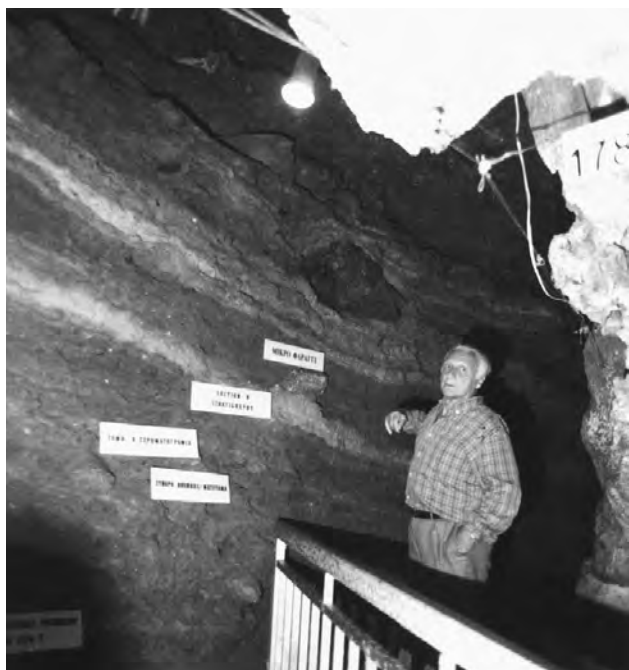


Figure 1. Dr. Aris Poulianos explaining the significance of the Petralona cave stratigraphy.

However, several scholars were reluctant to accept the above-referred revisions and others have never accepted them. As a result, the opponents of Dr. A. Poulianos managed to cause the interruption of the research three times. The first interruption was effected under the military junta (1967–1974). The second was caused more recently (1983–1997), i.e. in “democratic” times. The third interruption occurred on 4<sup>th</sup> April 2011, when AAG was again expelled from Petralona cave by an illegal (according to the appeals of the attorney Nicolas Triples) court

decision. During all of the interruptions many excavating data disappeared (findings, diaries, catalogues etc.), indicating that medieval mentality still survives within “scientific” circles even in the 21<sup>st</sup> century.

In order to challenge the chronologies of Dr. A. Poulianos, some Thessaloniki-based geologists tried to date directly the skull by the method of amino acid racemisation. This method could not then surpass 200,000 years, but the amount of bone used caused severe damages to the skull. Since 1979 Dr A. Poulianos and especially other non-Greek anthropologists (Murril 1980 from USA; Hennig et al. 1982; Protsch 1983 from Germany; and Stringer 1983 from England) had published their concerns – addressed by AAG also to the Greek Government – about the catastrophic interventions made on the human skull by cutting off bone pieces. However, this matter was never investigated. A committee of Thessaloniki geologists and archeologists ignored the above-mentioned palaeoanthropological data, declaring that they observed no damages.

To my understanding unless an international committee is formed with the participation of at least one AAG member, the matter will not be solved soon. Since the Petralona human skull belongs to the international prehistoric heritage, its protection should become of first priority today.

## 2. Last decade status

Besides never investigating the mentioned damages on the Petralona skull and never discussing the new evidence for the Petralona chronology, the Greek Archaeological Service also failed to address concerns on other important issues:

I. Due to the long established Czech-Hellenic collaboration and the high scientific standards of Czech Geologists and Speleologists, AAG invited Dr. Pavel Bosak (and today our Brno UIS President) along with Dr. Ivan Horacek to visit Petralona Cave end of 2005 in order to formulate a program for further research with new techniques on speleogenesis and archaeometry. Along with the official and detailed proposals towards the Archaeological Service, the financial support of approximately a quarter million Euros was offered by the Czech Academy including also EU funds. Until now and despite the huge economic crisis during the last years, a response was not provided.

At Kerrville in 2009 Dr. Pavel Bosak renewed his proposals, but again there was not any reply, demonstrating that in Greece the “official” apparatus did not function properly. Specifically in Bosak’s 2009 letter is written: *On behalf of the Czech Academy and in continuation of the 2005 proposal at investigating the speleogenesis, as well as the chronology of stalagmitic materials from Petralona Cave, I would like to renew the possibility of proceeding with such a program. Herewith, it is also noted that only for the next year (2010) there will be still the possibility of covering all lab and transportation expenses by the Czech part, and that the co respective results may be presented in the next (16<sup>th</sup>) International Congress of Speleology, which will be held in Brno during 2013.*

*Kerrville, Texas, USA, July 21<sup>st</sup> 2009, Pavel Bosak, Vice-President of the International Union of Speleology*

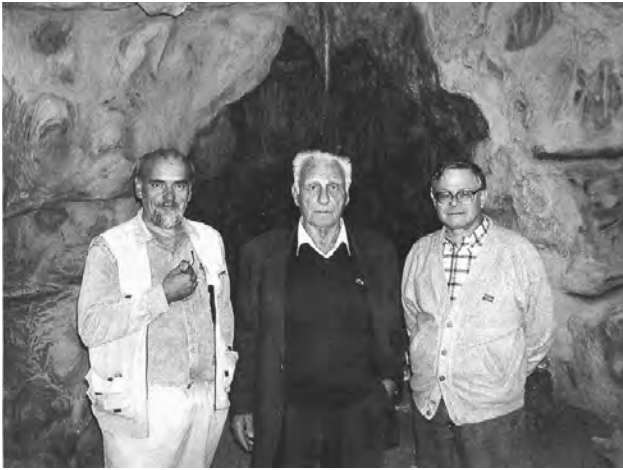


Figure 2. Ivan Horacek, Aris Poulianos and Pavel Bosak in the Anthropological Museum of Petralona Cave 24 Oct. 2005 (from newspaper “Chaos”).

**II.** In 2007 Professors of Geology & Palaeontology at Thessalonica University published a bilingual book (in Greek and English) regarding Petralona Cave (Koufos and Tsoukala 2007). In this book many “mistakes” are reported (some also supported by state archaeologists), but the most evident concern are: A) The authors deny the existence of a stratigraphy in Petralona Cave, in order to question the correlation that exists between the chamber where the Petralona skull was found and the cave’s stratigraphic sequence (cf. Fig. 1). B) Another distortion regarded the place and cave chamber that Petralona man was found as doubtful, in order to even more confuse the entire picture. Here it is worth of mentioning that the same issue was in details discussed at the Budapest UIS Congress, and further published on many occasions (p. ex. in both of N. Poulianos PhD theses). However, these bibliographical data were again totally ignored.

**III.** During the aforementioned “illegal” abolishment of 4<sup>th</sup> April 2011, AAG officially asked several times to produce commonly accepted catalogues of the findings together with the state employees. The “authorities” denied even this simple and absolutely necessary action, for a number of the about 100,000 findings deposited in the Anthropological Museum. By the end of November 2012 it became also known that the Archaeological Services started to rename and/or renumber findings that have been already published before, an action that surely will lead to great confusion in the future and violates common scientific rules as well as the rights of the first publishers.

**IV.** After the “illegal” abolishment of AAG in 4<sup>th</sup> April 2011, the Central Archaeological Council (CAC) decided that all of the drawings reproduced by one of the most important Greek folk painters, the late Christos Kagaras (resistance fighter against the Nazi occupation of Greece), must be covered and hidden as not adherent with the findings of Petralona Cave. This is unfortunately not correct, since these paintings (today displayed only on the AAG affiliated website) are referred to the prehistoric inhabitants of the Petralona region. Others of his drawings represent also the evolution of life, inspired from another great painter, the Czech Augusta Burian. It is worth mentioning that the former President of France, Valery Giscard d’Estaing, during his visit to Petralona exalted Kagaras’ paintings, calling them “magnifique”. CAC also

decided to remove many sculptures made by Agella Korovessi who was the silver (2<sup>nd</sup>) winner at Beijing 2008 Olympic Art Games. Protests of AAG as well as of the main Greek artistic organization never reached the state’s ears.



Figure 3. A picture of Ch. Kagaras, indicating prehistoric inhabitants of Petralona cave hunting a rhino.

Also, the sculpture of a Miocene giraffe, 3 m high, being the biggest tourist attraction, did not escape (in September 2012) from today’s “barbarism”. It is astonishing that during our current economic crisis state funding was not only available to destroy artistic representations but also – among other similar irrational actions – to replace the existing perfectly functional central gate with a very expensive one October 2012.



Figure 4. The giraffe referred to in the text as it was until October 2012.

**V.** On several occasions to both Poulianos even a simple lecture to schoolchildren or to a tourist group in front of the Petralona Cave was forbidden upon absurd excuses (claiming that the excavators are not granted to such rights).



Figure 5. The giraffe referred in the text, as it is destroyed and lying on the ground today (18<sup>th</sup> November 2012) 150 m away from the entrance of Petralona cave.



**VI.** The marble keystone of the Petralona Anthropological Museum was removed at the end of 2011. On this keystone it was carved that the Greek state inaugurated the building in 1978 on the initiatives of Dr Aris N. Poulianos.

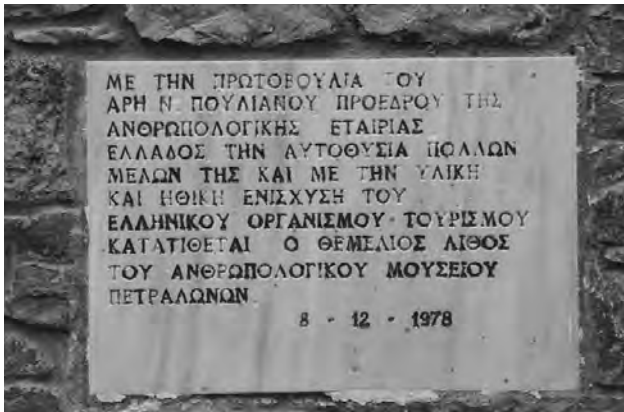


Figure 6. The keystone as it was until 2011.



Figure 7. The empty space on the Anthropological Museum's wall, indicating where the keystone was until 2011.

**VII.** On 8<sup>th</sup> March 2012 a masked man trespassed the house of Aris Poulianos and his wife Daphne (200 m near the cave) attacking them with a rifle. The 88 years old anthropologist struggled with the gunman in order to stall him and give his wife the time to escape to the woods. As a result he got injured and received seven stitches at the local hospital. The gunman stole money he found and managed to get away. The most interesting issue is that as the state faces economic hardship no budget was allocated to post guards after 2011, and it was done so without informing the Poulianos family.

**VIII.** During summer 2011 CAC services provided unreal data to the Greek Parliament concerning the financial aspects of the cave. Until now no formal investigation started on the topic.

**IX.** For one and a half year and for three consecutive times the CAC services refused to the author (as well as to Dr. E. Kambouroglou and Dr V. Giannopoulos – members of ISCA scientific committees) the study of the material deposited in the Anthropological Museum, while at the same time from its' exhibition hall many findings are missing, as for example a fossil leaf covered by stalagmitic material. The photo of this leave is published in the Greek version of the journal "Economist – Intelligent Life" in November 2012. Again, no answer was ever given to what happened to this fossil leaf.

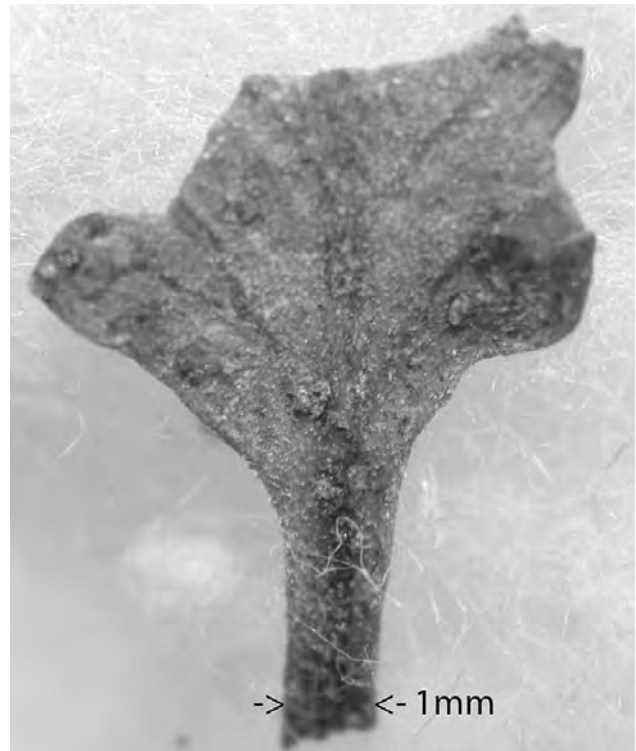


Figure 8. The fossil leaf referred to in the text.

**X.** Since almost two years 13 employees of the AAG, all from Petralona village, are sent to unemployment for no apparent reason, augmenting this tremendous phenomenon of the Greek society.

The President of the European Anthropological Association, Professor C. G. Nicholas Mascie-Taylor, in 5<sup>th</sup> September 2012, summarized most of the above points, in a distress letter towards to the Greek Archaeological Service (where it was given the general protocol number 992999 on 28-9-2012):

*University of Cambridge, Head of Department of Archaeology and Anthropology*

*Pembroke Street, Cambridge CB2 3QY, Tel: +44 (0) 1223 335456, Email: nmt1@cam.ac.uk*

*To the Greek Ministry of Education, Religions, Culture and Sports, Bouboulinas 20-22, Athens 106 82, Greece*

*5 September 2012*

*Dear Sir,*

*I am writing on behalf of the European Anthropological Association, which is the umbrella professional and academic association linking all of the national European biological anthropology and human biology societies, to express our concerns about the conservation of the Petralona Cave and Skull, the misinformation of the dating of the skull, as well as the treatment of personnel associated with the conservation of the Cave.*

*The bases of our concerns are that the skull has been damaged through many scratches and the crown of a tooth (1<sup>st</sup> right molar) cut off. As requested by Anthropological Association of Greece what is required is a detailed description of the present status of the skull, so that no one in future can arbitrarily damage it further. There is also the problem of dating which has been scientifically dated at about 700,000 years ago not 300,000 as is given at the*

information desk (today in front of the cave). *There is a very detailed record of the excavations and findings which need to receive further public presentation but which have never been catalogued so as to prevent specimens going missing.*

*It is very unfortunate that the Greek Archaeological Department stopped Dr. Aris Poulianos from further work in the Cave without any explanation. It is also very worrying that Dr. Poulianos and his wife were physically attacked and injured in their home earlier this year and the culprits have not been found. He was also verbally abused when attempting to give an invited presentation to teachers and school children.*

*Senior anthropologists and geologists have also been denied access to the Cave and the specimens for further study on a number of occasions without substantive reasons. Earlier this year there has also been misinformation given to the Greek Parliament concerning financial aspects of the Cave.*

*I look forward to receiving answers to these questions. Yours faithfully*

*Professor C G N Mascie-Taylor MA, PhD, ScD (all Cambridge), FSB, FNAS (Hungary)*

### 3. Instead of an epilogue

According to Dr. A. Poulianos all of the above questionable and rather suspicious events are due to the attempt of some state employees to receive EU funds for a project that already exists, presenting it as their own. Hopefully, the AAG along with the support of the International Scientific Community will not allow this to happen, especially because of the duty to protect Petralona's international and cultural heritage. It is also an expectation that the Archaeological Service will start to change the way it functions and will awaken especially with regards to public interest.

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