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The Conference proceedings include abstracts and short papers covering numerous topics of Cambrian stratigraphy, palaeontology, as well as some aspects of palaeogeography, tectonics and geochemistry of Siberia, Central and Southeastern Asia, Europe, the Middle East and Northern America. Results of activity of the ISSC and its working groups are summarized in this volume. Detailed geological information on sections proposed as potential stratotypes for the Global Stages and their lower boundaries is also presented.
PROPOSED GLOBAL STRATOTYPE SECTION AND BOUNDARY POINT (GSSP) FOR CAMBRIAN SYSTEM STAGE 5 AND SERIES 3 IN MURERO (SPAIN)


1. Área y Museo de Paleontología, Universidad de Zaragoza (Zaragoza, Spain)
2. Depto. de Geología, Universitat de València (València, Spain)
3. Área de Cristalografía y Mineralogía (Zaragoza, Spain)
4. Depto. de Geodinámica y Paleontología, Facultad de Ciencias Experimentales, Campus de El Carmen, Universidad de Huelva (Huelva, Spain)
5. Institut für Geologie und Paläontologie (Clausthal-Zellerfeld, Germany)
6. Dirección General de Patrimonio Cultural, Departamento de Educación, Cultura y Deporte, Gobierno de Aragón (Zaragoza, Spain)

Following the ISCS recommendations, we nominate the Acodaricaricovexides mureroensis FAD in the Rambla de Valdemiedes 2 (RV2) section near Murero (Cadenas Ibéricas, Zaragoza Province, north-eastern Spain; Figs. 1, 2) as the GSSP for the base of the Cambrian Stage 5 (Jilocal, herein proposed) and, respectively, Series 3. This polymeroid trilobite species is widely distributed across one palaeocontinent at least, namely Eastern Gondwana (Spain, Morocco, Italy, Turkey), where its occurrences are documented in numerous sections, and is recorded also in Siberia and probably Poland. A. mureroensis is one of the most...
Fig. 2. Biostratigraphy, sampling results, palaeoecology and C-isotope geochemistry of the Valdemiedes Formation at Rambla de Valdemiedes 2 section (modified from Dies Alvarez, 2004). (*) A normative sampling was performed for each bed: only complete specimens and craniids were collected during a standardized sampling time.
between the FADs of other relatively widespread species, *Palaeolemus antiquus* from below and *Ovatorycrocara granulata* from above that allow stratigraphers recognize this level with relative ease.

![Fig. 3](image.png)


The marine fine-grained siliciclastics and carbonates spanning the proposed GSSP in Murero belong to the Mesones Group, which is subdivided in ascending order into the Valdemiedes, Mansilla, and Murero formations. Each of them yields layers with fossils of exceptional preservation (Lagerstätten). Studies on clay minerals indicate a low anchizone grade for the rocks of the Mesones Group (Bauluz et al., 1998).
Fig. 4. Correlation chart of the proposed GSSP for the Jilocal Stage (based on The Lower–Middle... 2007). A. m.: Acodaparadoxides mureroensis. O. g.: Ovatorycostacara granulata. O. i.: Orychocephalus indicus
The Mesones Goup crops out in the RV-2 section. In chronostratigraphic sense, the proposed section includes the uppermost Bibilian (Cambrian Stage 4 of Series 2), the entire proposed Jilocan Stage, and the lower to middle Drumian Stage.

The RV-2 section is monofacial and represents essentially continuous deposition under non-restricted marine, sublittoral conditions, yielding abundant and well-preserved fossils representing some of the most cosmopolitan species in this time interval of a non-restricted marine basin. Palaeoecological conditions evolved up the section to more open sublittoral settings (The Geology... 2002). The section is well exposed, lacks synsedimentary and tectonic disturbances, strong metamorphism and diagenetic alteration but possesses a number of marker horizons enhancing the possibility for long-distance correlations. A minor oblique fracture is observed beyond the interval under discussion (Fig. 1b). It is well-studied and has enormous published history in accessible magazines.

The proposed GSSP is located at 41°10’03.5” N latitude and 01°28’34.4” W longitude. It is defined at the base of a shale layer of the uppermost Valdemiedes Formation containing the lowest occurrence (FAD) of the cosmopolitan polymeroïd trilobite species *A. murenoensis* (base of the *A. murenoensis* Zone). It occurs 59.6 m above the base of the RV-2 section (bed number 8A of Liñán and Gozalo, 1986; Díes Álvarez, 2004; Figs. 1b, 2 herein), immediately above the Valdemiedes Extinction Event (Problemática..., 1993) (Fig. 3). Beds recording the Valdemiedes Event and those immediately below show quick oscillations in δ13C values between −3.3% and −27.5%, and strong geochemical anomalies of major and minor elements. Secondary markers of a probable global significance near the *A. murenoensis* FAD include an ongoing transgressive phase of an eustatic event. The pronounced negative δ13C excursions recorded in the Valdemiedes Event is probably the same that is found at the level of the last olenellid appearance in Laurentia (Carbon, 2002) and at the level of the last redlichiid appearance in South China and named the ROECE (Redlichiid-Olenellid Extinction Carbon Excursion) by Zhu et al. (2006), and probably the former Lower–Middle Cambrian boundary established in Laurentia and in Europe really were drawing at the same level and coinciding with the *A. murenoensis* FAD.

The proposed GSSP is well above (two trilobite zones above) the strata of the lower Bibilian Daroca Formation accumulated during the global Hawke Bay or Daroca Regression Event (Díes Álvarez et al., 2007).

The base of the new proposed Jilocan Stage (Fig. 3), once ratified, will automatically define the top of the Cambrian Series 2 and Stage 4. The name *Jilocan* derives from the Jiloca River (a tributary of the Jalón River), which goes by the village of Murero near its confluence with the Rambia (gully) de Valdemiedes. The upper boundary of the Jilocan Stage would coincide with the base of the ratified Drumian Stage (*Psychagnostus atavus* FAD) which is an equivalent to the polymeroïd trilobite *Pardailhania hispida* FAD (The Geology... 2002), recorded at the base of the Murero Formation.

The new Jilocan Stage is divided by trilobites into zones, in ascending order: *A. murenoensis*, *Eccaparadoxides dzuwi*, *E. asturianus*, *Baudulesia tenera* and *B. graniere* zones (Fig. 4). Thus, the Jilocan Stage comprises the upper part of the Valdemiedes Formation, the Mansilla Formation and the base of the Murero Formation in all localities of Cadenas Ibéricas.

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**REFERENCES**


