
Strenuaeva (Trilobita) from the Marianian (Cambrian Series 2) of Iberia: systematic assessment, biostratigraphy and palaeobiogeography

Luis Collantes*¹, Sofia Pereira¹, Eduardo Mayoral², Eladio Liñán³, Alexandre Sepúlveda⁴, and Rodolfo Gozalo⁴

¹Centro de Geociências, Departamento de Ciências da Terra, Universidade de Coimbra – Portugal

²Departamento de Ciencias de la Tierra, Facultad de Ciencias Experimentales, Campus de El Carmen, Universidad de Huelva – Spain

³Departamento de Ciencias de la Tierra, Facultad de Ciencias-Instituto de Ciencias Ambientales (IUCA), Universidad de Zaragoza – Spain

⁴Departamento de Botánica y Geología, Universitat de València – Spain

Abstract

Problems surrounding the identification and systematics of taxa belonging to the trilobite family Ellipsocephalidae have been highlighted for years. In this work we revise the ellipsocephalid *Strenuaeva* from Spain based on analyses of the type material of defined species together with newly collected specimens from the Ossa-Morena Zone and the Iberian Chains. Two species are recognized as valid for these regions, *S. sampelayoi* and *S. inflata*. The species *S. melendezi* and *Ellipsostrenua alanisiana* from Spain, as well as *S. marocana* from Morocco, are here considered junior synonyms of *S. sampelayoi*. Previous assignment of the Spanish species to *Issafeniella* is here rejected. The abundant available material of *S. sampelayoi* made it possible to evaluate the taphonomical role in the preservation of some characters and to recognize intraspecific variability similar to that described in *S. inflata* from Baltica, reinforcing its assignment to *Strenuaeva*. Biostratigraphically, *Strenuaeva* ranges from the uppermost Cambrian Stage 3 to the uppermost Cambrian Stage 4. In Iberia, it is restricted to the middle Marianian in the Ossa-Morena Zone, whereas it is known from the lowermost middle Marianian to the lowermost upper Marianian in the Iberian Chains. *Strenuaeva* is known from Baltica (Scandinavia and Holy Cross Mountains, Poland), Iberia (Spain), Morocco and, possibly, western Avalonia (Newfoundland).

Keywords: Trilobita, Ellipsocephalidae, Ossa Morena Zone, Iberian Chains, Cambrian Stages 3 and 4

*Speaker