



## Superficial and subsuperficial features in the Karst Region of Cordisburgo, Minas Gerais, Brazil

L.E.P. Travassos

PUC Minas University, Environmental Studies Laboratory, Post-Graduation Program in Geography, Belo Horizonte - MG, Brazil (luizpanisset@uol.com.br). Promove College.

The State of Minas Gerais, Brazil, is approximately 586.528 km<sup>2</sup>. From this total, it is believed that about 29,000 km<sup>2</sup>(Piló 1997; 1999) are composed by carbonatic rocks. The region of Cordisburgo, in the State of Minas Gerais, is developed on the metasediments of the Bambuí Group, Lagoa do Jacare Formation (Upper Proterozoic). Its karst is considered to be one of the most significant regions in Minas Gerais State, although less prominent than the features of the Environmental Protected Area of the Lagoa Santa Karst. The region of Cordisburgo, however, presents excellent examples of karst geomorphology. It is distinguished for both the magnificent potential of its endokarst and the important archaeological, paleontological, historical and tourist sites it offers. The region is also of chief historical importance: it is where Paleontology, Archaeology and Speleology were developed together for the first time in the Americas. This was done by the Danish naturalist Peter W. Lund (1801-1880). Like other karst scenarios, the exokarst evolved from the primitive endokarst favoring the development of expressive outcrops, dolines, uvalas and *poljes*. The third largest cave of the State of Minas Gerais is located in Cordisburgo with 4,620 meters. Other 15 caves, some of them which were studied by Lund in the 19<sup>th</sup> century, complete the intricate endokarst in this region. The importance of the cave *Lapa Nova do Maquiné* is reinforced by the State Decree nº 44120 (2005), which creates the Peter Lund Natural Monument as a Conservation Unit. It was created in order to protect the historical-scientific site of the Maquiné Cave and its surroundings. There is little research on the Lagoa do Jacare Formation, especially regarding the amount of CaCO<sub>3</sub> in comparison to the phyllites, quartz veins, etc. It is possible that pure limestone sites associated to non-carbonatic layers can be found there. Studies about the magnitude and the direction of underground water are still insufficient. All evidences lead to the fact that the endokarstic flow in the region is commanded towards the base level of the Velhas River basin by the Onça's Creek. In the north of this region, the subterraneous flow seems to be also associated to the Velhas River basin, where most of the identified forms are that of an evolved karst (plains and lakes). For all this, it is important to develop systematic studies in the area.

Keywords: karst, endokarst, exokarst, Cordisburgo region, Minas Gerais, Brazil.