INTRODUCTION: The epidemiological profile of scorpionism showed great change in the past ten years in various countries in Latin America, especially in Brazil. Species of scorpion with very toxic poisons with high capacity of proliferation on environment areas modified by humans, explain, in part, the growth of scorpionism in different regions of the country. However, the available epidemiological information about the scorpionism is very heterogeneous between nearby and similar states. In the present study, we aimed to compare the profile of the scorpion stings in the states of Rio de Janeiro (RJ) and Espirito Santo (ES) of southeastern Brazil.

METHODS: We analyzed comparatively the evolution of scorpion accidents and deaths due to scorpion stings recorded in the Sistema de Informação de Agravos de Notificação (SINAN) of the Ministry of Health of Brazil for the RJ and ES between 2001 and 2013. We analyze geographic, demographic, economic and environmental information provided by the Instituto Brasileiro de Geografia e Estatística (IBGE), the Instituto Estadual do Ambiente (INEA—RJ) for these two states and discuss the state systems of medical care to scorpion stings.

RESULTS: The RJ has territory of 43,780 km² and ES, 46,095 km² with population densities of 365.23 and 76.25 hab/km² respectively. The RJ is composed of 92 municipalities and has 58 envenoming treatment centers and in 78 municipalities from ES there are 55 envenoming treatment centers. In the analyzed period, 100% municipalities of ES reported to SINAN a total of 14610 accidents by scorpions while RJ, 2864 accidents were reported by 76.1% of the municipalities, with annual averages of 1123.84 and 220.30 recorded during the period. To this period are known 10 deaths due to scorpion stings in RJ and 27 deaths in ES.

CONCLUSIONS: Although similar in territory and biomes, the states of RJ and ES preservation and distribution of their native vegetation are very different, in RJ It covers 28% of the territory and 8.9% of the territory from ES, the remainder being mostly covered by pastures and cultivation of Eucalyptus. The main dangerous scorpion in the Southeast region of Brazil is the Tityus serrulatus, parthenogenetic specie, originating from regions of open vegetation in the interior of Brazil with high capacity and occupancy of deforested areas. Our results strongly indicate that the land use and agricultural models adopted in the state of ES may have favored the scorpionism in its territory.