Rarity of Jurassic Insects on the Gondwana Supercontinent

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Jurassic insects from Gondwana (South America, Africa, Australia, India and Antarctica) are extremely rare; altogether less than 20 species have been described. The presence of flood basalts and formation of desert landscapes in many regions during this period may largely account for the rarity of localities.

Key Words: biodiversity – desert landscapes – Flood basalts – Fossil Insecta

1 Introduction

With all the continental areas of the world broadly connected at the beginning of the Jurassic, it is generally accepted that the plant and animal inhabitants would be substantially alike across the land, a certain amount of geographic variation in the faunal distribution notwithstanding. That is what is seen in the predominant group of animals of this period, the dinosaurs, but that fact does not apply for the distribution of the smaller faunal representatives of this landmass, the insects.

The first major breakup of Pangaea begun just before the Jurassic, resulting into shallow seas covering much of Europe, and northwestern Africa splitting away from southeastern North America. Africa and South America, however, were still conjoined with each other and the major Gondwanan continental fragments. The environment had apparently evolved into a greater carrying capacity than the preceding time of predominantly deserts and sand dunes. But this higher potential of niches is not reflected in the amount of insect-bearing localities on Gondwana. It is the aim of this short paper to review the occurrences of Jurassic Gondwanan insects and to give some possible explanations for their meagre fossil record there during this period.