

NEW RECONSTRUCTIONS OF SELECTED LATE PALAEOZOIC NEW GRYLLOBLATTIDA (INSECTA) FROM THE PARANÁ BASIN ARTHROPODS (PTERYGOTE INSECTS, ARACHNIDS AND CARBONIFEROUS, SOUTHEAST BRAZIL)¹ ARTHROPLEURA)

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During the last years the knowledge of the exact morphology of some well preserved fossil palaeozoic arthropods is grown to such a level that it is possible to draw well based reconstructions of the living habitus of these special species. We have started a project of this matter with the aim to offer reconstructions of these animals which can be used for example for popular scientific books as well as for exhibitions in museums.

The steps for this special work are as follows:

- 1 Gaining and compilation of all data of the species in question: measurements, proportions, knowledge of their paleoecology, locomotion (and flight in pterygote insects), nutrition, sexual behaviour etc.
- 2 Preparing experimental sketches of the specimen in different views.
- 3 For the final drawing it is necessary to have a look at the closest related recent taxa to decide the final posture of the fossil specimen, the shadows, the environment and to choose the most appropriate colour.

The presented selected arthropods are listed here as follows:

- 1 Insecta: Palaeodictyoptera: *Homoioptera vorhallensis* BRAUCKMANN & KOCH, 1982 (Namurian B; Germany); *Delitzschala bitterfeldensis* BRAUCKMANN & SCHNEIDER, 1996 (one of the oldest known pterygote insects, uppermost Lower Carboniferous; Germany);
- 2 Insecta: Odonatoptera: *Namurotypus sippeli* BRAUCKMANN & ZESSIN, 1989 (Namurian B; Germany); *Erasipterooides valentinii* (BRAUCKMANN, 1985) (Namurian B; Germany);
- 3 Arachnida: Uropygi: *Geralinura naufraga* (BRAUCKMANN & KOCH, 1983) (Namurian B; Germany);
- 4 Arachnida: Ricinulei: *Curculionides adompha* BRAUCKMANN, 1987 (Namurian B; Germany);
- 5 *Arthropleura* JORDAN, 1854 (the greatest known terrestrial arthropod genus; late Carboniferous).

The Paleozoic insect record in the Brazilian paleoentomofauna, apart of these which came from the Irati Formation, are still extremely scarce, and just found in three punctual localities: Monte Mor, São Paulo State, Cerquillo, São Paulo State and Mafra, Santa Catarina State, all they from Paraná Basin (Carboniferous). Insects of the Order Grylloblattida are by the first time recorded in the Brazilian deposits, represented in the Carboniferous and Permian Russian deposits. The Brazilian material consist of isolated fore wings, relatively well preserved, representing three new genus of three new specimens and, at least, two distinct families, marking the older record of insects in the Brazilian paleoentomofauna.

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