

Cavernicole diversity in western Guangxi Province, SW China

Arthur CLARKE

School of Zoology, University of Tasmania, GPO Box 252C, Hobart, Tasmania 7001, Australia. arthurc@southcom.com.au

Recent cave fauna studies in the Lingyun and Leye counties of western Guangxi Province in SW China have yielded a array of aquatic and terrestrial cavernicoles, including a few vertebrate species: fish, frogs and bats. The caves contain a diverse range of epigean and hypogean invertebrates; many of the obligate hypogean species have cave-adapted traits. Invertebrate cavernicoles include planarians, oligochaets, aquatic and terrestrial gastropods, isopods, decapod crabs and shrimps, Collembola, Plecoptera, Orthoptera, Dermaptera (earwigs), Blattoidea (cockroaches), Isoptera (termites), Hemiptera, Lepidoptera, Trichoptera, Diptera (including mycetophilids), Hymenoptera, Coleoptera, Chilopoda, Diplopoda, Symphyla, Uropygi (whip scorpions), Araneae (spiders), Acarina (mites and ticks), pseudoscorpions and Opiliones (harvestmen). A number of the invertebrate species groups including family types represented amongst the cave species in this sub-tropical to tropical region in SW China are also found in caves of the cool temperate karsts of southern hemisphere regions. The similarity of species types could suggest evidence for patterns of convergent evolution or the more likely possibility that the southern hemisphere species have an ancient Pangean origin rather than a more recent Gondwanan origin. Many of the caves show evidence of several species of microbiota: bacteria and fungi. The major food inputs to cave ecology and ecosystems in this region of SW China are stream borne organic detritus or flood debris, bat guano and agricultural products.