
PLENARY TALK: Ecology, physiology and behaviour

What you always wanted to know about African mole-rats but never dared to ask

Begall, Sabine^{1*}

¹ University of Duisburg-Essen, Department of General Zoology, Essen, Germany

* sabine.begall@uni-due.de

DOI: 10.20315/evmc.2025.008

African mole-rats (Bathyergidae) are strictly subterranean rodents spending most of their lives in self-constructed burrow systems that they rarely leave. All bathyergids display morphological adaptations to life underground: cylindrical bodies, short extremities, prominent incisors or elongated nails as digging tools, to name just a few. Most research in this group has been focused on the naked mole-rat (*Heterocephalus glaber*) and their hairy cousins of the genus *Fukomys*. Various aspects of their sensory biology (especially hearing, vision, and magnetoreception) have been studied in detail. The animals are highly social, and reproduction is restricted to one breeding pair in each family. As the offspring stay for a considerable time with their parents, families consist of multiple generations which often have been referred to as “eusocial”. Under laboratory conditions, mole-rats have a remarkably long maximum life-span with breeders living significantly longer than non-breeders. Reports about cancer incidence are close to zero, and at least naked mole-rats and Ansell’s mole-rats (*Fukomys anselli*) are resistant to skin cancer after treatment with a strong mutagen.