BioOne COMPLETE

The 13th African Small Mammal Symposium in Mekelle, Ethiopia, and the evolution of these meetings

Authors: Bryja, Josef, Meheretu, Yonas, Denys, Christiane, Taylor, Peter, and Leirs, Herwig

Source: Journal of Vertebrate Biology, 69(2)

Published By: Institute of Vertebrate Biology, Czech Academy of Sciences

URL: https://doi.org/10.25225/jvb.E2002

BioOne Complete (complete.BioOne.org) is a full-text database of 200 subscribed and open-access titles in the biological, ecological, and environmental sciences published by nonprofit societies, associations, museums, institutions, and presses.

Your use of this PDF, the BioOne Complete website, and all posted and associated content indicates your acceptance of BioOne's Terms of Use, available at www.bioone.org/terms-of-use.

Usage of BioOne Complete content is strictly limited to personal, educational, and non - commercial use. Commercial inquiries or rights and permissions requests should be directed to the individual publisher as copyright holder.

BioOne sees sustainable scholarly publishing as an inherently collaborative enterprise connecting authors, nonprofit publishers, academic institutions, research libraries, and research funders in the common goal of maximizing access to critical research.

Downloaded From: https://bioone.org/journals/Journal-of-Vertebrate-Biology on 28 Mar 2024
Terms of Use: https://bioone.org/terms-of-use

Journal of Vertebrate Biology

Open Access

J. Vertebr. Biol. 2020, 69(2): E2002 DOI: 10.25225/jvb.E2002

SPECIAL ISSUE: AFRICAN SMALL MAMMALS

The 13th African Small Mammal Symposium in Mekelle, Ethiopia, and the evolution of these meetings

Josef BRYJA[1*], Yonas MEHERETU[2], Christiane DENYS[3], Peter TAYLOR[4] and Herwig LEIRS[5]

[1] *Institute of Vertebrate Biology, Czech Academy of Sciences, Brno, Czech Republic; Department of Botany and Zoology, Faculty of Science, Masaryk University, Brno, Czech Republic; e-mail: bryja@ivb.cz*

[2] *Department of Biology and Institute of Mountain Research and Development, Mekelle University, Mekelle, Tigray, Ethiopia; e-mail: meheretu.yonas@mu.edu.et*

[3] *Institut de Systématique, Evolution, Biodiversité (ISYEB), Muséum national d'Histoire naturelle, CNRS, Sorbonne Université, EPHE, Université des Antilles, Paris, France; e-mail: denys@mnhn.fr*

[4] *School of Mathematical and Natural Sciences, University of Venda, Thohoyandou, South Africa; e-mail: peter.taylor.univen@gmail.com*

[5] *Evolutionary Ecology Group, Department of Biology, University of Antwerp, Antwerp, Belgium; e-mail: herwig.leirs@uantwerpen.be*

The 13th African Small Mammal Symposium (ASMS) was organized on September 16-21, 2019, at Mekelle University in Mekelle, Tigray, Ethiopia. Starting in 1977, these symposia are organized every four years and since 2003 have been held in tropical Africa. The aim of the meetings is to promote communication among researchers and students interested in various aspects of the biology of African small mammals (mainly rodents, insectivores, bats, afrotherians, small carnivores and primates), which are significantly understudied in comparison with their larger relatives.

In this editorial contribution, which introduces a special issue of Journal of Vertebrate Biology on African small mammals, we would like to briefly summarize the history of these meetings and to pinpoint the major trends in research on African small mammals, based on an analysis of the presentations at these meetings.

The list of previous meetings and their published outputs

- **Colloquium on Ecology and Taxonomy of African Small Mammals, Carnegie Museum of Natural History, Pittsburgh, 19-22 September, 1977**

The first meeting, attended by 41 persons, was organized by D. A. Schlitter at the Carnegie Museum of Natural History field station, Powder Mill Nature Reserve near Ligonier in the foothills of Allegheny Mountain in western Pennsylvania. Proceedings from this meeting were published in the Bulletin of the Carnegie Museum (available at https://www.biodiversitylibrary.org/page/52277183#page/345/mode/1up).

- **2nd meeting – no data available**

The 2nd meeting, designated as occurring at some point between 1977 and 1981, probably never happened as a formal conference. However, it is thought that W. Verheyen and his colleagues credited his Belgian

* *Guest editor of special issue*

Downloaded From: https://bioone.org/journals/Journal-of-Vertebrate-Biology on 28 Mar 2024
Terms of Use: https://bioone.org/terms-of-use

colleague, X. Misonne, for organising a group of researchers on African mammals in Brussels (around 1964/1965) as part of an effort to work on manuscripts for a Smithsonian series on the status and identification of African mammals, ultimately published as "The mammals of Africa: an identification manual" in 1974 with J. Meester and H.W. Setzer as editors. As an outcome of this informal meeting in Belgium, X. Misonne published a proceedings volume in 1966 as "Annales du Musée Royal de l'Afrique Centrale, Sciences Zoologiques 144". The subsequent colloquium in Antwerp was thus called "the 3rd" (D.A. Schlitter, pers. comm.).

- **3rd International Colloquium on Taxonomy and Ecology of African Small Mammals, Antwerp, Belgium, July 20-24, 1981**

Proceedings from this meeting were published in 1983 as volume 237 of Annales du Musée royal de l'Afrique centrale, Série in-8° (edited by E. Van der Straeten, W.N. Verheyen and F. De Vree), which is available at https://www.africashop.be/product/proceedings-of-the-3rd-international-colloquium-on-the-ecology-and-taxonomy-of-african-small-mammals/.

- **4th International Colloquium on the Ecology and Taxonomy of African Small Mammals, Windhoek, Namibia, August 13-20, 1984**

Organized by the late C.G. (Neels) Coetzee. Most of the presentations were initially held at the Namib Desert Research Station at Gobabeb, located on the northern edge of the Namib Desert, followed by a visit to the "White Lady" rock painting on the way to Etosha National Park in northern Namibia where the remaining presentations were given at Okaukuejo Rest Camp in Etosha. The proceedings were published in 1986 in Cimbebasia as the "Fourth International Colloquium on the Ecology and Taxonomy of African Small Mammals (collected papers). Cimbebasia, series A, 8 (1-26): 1-246 (edited by C.G. Coetzee, D.A. Schlitter, and H. Rust)".

- **5th Colloquium on Ecology and Taxonomy of African Small Mammals, Rogate, England, August 1987**

The meeting in Rogate was organized by G.B. Corbet and many European (especially UK) researchers participated. A small number of African researchers were present, the majority from the Republic of South Africa. No special publication resulted from this meeting.

- **6th International Colloquium on the Ecology and Taxonomy of Small African Mammals, Mitzpe-Ramon, Israel, 11-16 August, 1991**

The meeting was organized by A. Haim (Haifa University) in Israel in 1991. At that time new research directions (e.g. eco-physiology and the first molecular phylogenetic papers based on the DNA-DNA hybridisation) were introduced. Few students were present at this meeting. A detailed report of the meeting was provided by P. Taylor in ASM Newsletter no. 13 (1992) and the proceedings were published as issues 3-4 of volume 38 (1992) of Israel Journal of Zoology (available at https://www.tandfonline.com/toc/tiee19/38/3-4?nav=tocList).

- **7th International African Small Mammal Symposium, Itala Game Reserve, KwaZulu Natal, South Africa, 26-30 September, 1995**

In 1995 a relatively small meeting was organized in South Africa by M. Perrin (University of Natal, Pietermaritzburg). In addition to traditional ecology and taxonomy contributions, many papers about eco-ethology and the physiology of small mammals were presented. No special publication resulted from this meeting.

- **8th International African Small Mammal Symposium, Paris, France, 5-9 July, 1999**

The Paris conference, organized by C. Denys and L. Granjon, hosted more than 120 zoologists (many from Europe and North Africa, with relatively few from sub-Saharan Africa) representing 25 countries. A series of papers on Taxonomy and Classification (10 papers), Phylogeny and Evolution (8), Behaviour, Physiology and Reproduction (6), Ecology (9) and all meeting abstracts were published in the IRD editions: Denys C., Granjon L., Poulet A. (eds.), 2001: African small mammals. Proceedings of the 8th International Symposium on African Small Mammals, Paris, July 1999. IRD Éditions, collection Colloques et séminaires, Paris, 1-570 (available at https://asms2019.ivb.cz/wp-content/uploads/8thASMS_Paris.pdf).

Downloaded From: https://bioone.org/journals/Journal-of-Vertebrate-Biology on 28 Mar 2024
Terms of Use: https://bioone.org/terms-of-use

- **9th International African Small Mammal Symposium, Morogoro, Tanzania, 14-18 July, 2003**

The Morogoro meeting in 2003 (co-chaired by R. Makundi and H. Leirs) was the first really "African" meeting with a strong delegation of students and researchers from Kenya-Tanzania-South Africa. Many contributions on the practical significance of African rodents (pest control, rodent management, zoonoses, etc.) were presented. A series of selected papers were published as a special issue of Belgian Journal of Zoology (available at https://asms2019.ivb.cz/wp-content/uploads/9thASMS_Morogoro.pdf).

- **10th International African Small Mammal Symposium, Abomey-Calavi, Benin, 20-25 August, 2007**

This was the first, and until now the only, ASMS meeting in western Africa and it was chaired by J.T. Claude Codja (University Abomey-Calavi, Benin), G. Apollinaire Mensah (National Institute of Agricultural Research, Benin) and H. Leirs (University Antwerp). This meeting enabled the participation of students and researchers from Benin, Cameroon, Cote d´Ivoire and Nigeria. Fourteen articles were published in Mammalia (Special issue: 10th International African Small Mammals Symposium (ASMS), vol. 72(3), September 2008) – available at the publisher´s website https://www.degruyter.com/view/journals/mamm/72/3/mamm. 72.issue-3.xml. The abstract book from this meeting is available at https://asms2019.ivb.cz/wp-content/uploads/10thASMS_Benin.pdf.

- **11th African Small Mammal Symposium, Kwaluseni, Eswatini, 3-8 July, 2011**

About 90 researchers met in Kwaluseni, with almost half of them from South Africa and Eswatini. Besides the traditional topics (ecology, diversity, taxonomy), there was a special session about Afrotheria. Local organizing committee was chaired by A. Monadjem and T. Mahlaba. The abstract book from this meeting is available at https://asms2019.ivb.cz/wp-content/uploads/11thASMS_Swaziland.pdf.

- **12th African Small Mammal Symposium, Mantasoa, Madagascar, 12-17 April, 2015**

The bi-lingual meeting, organized by S.M. Goodman, V. Soarimalala and their Malagasy collaborators, attracted a large number of participants (ca. 130) from more than 20 countries and included numerous presentations by Malagasy students and researchers, especially about the unique endemic fauna of

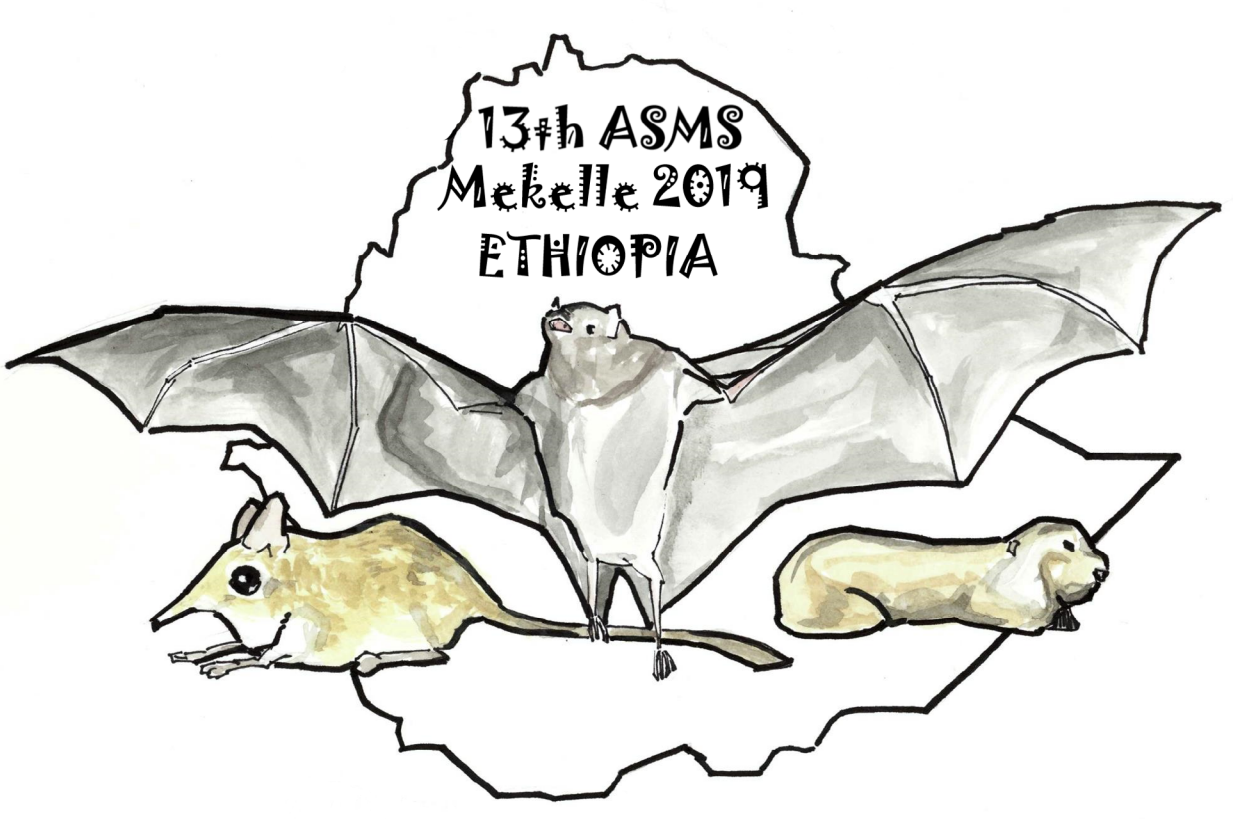


Fig. 1. Logo of the 13th African Small Mammal Symposium in Mekelle, Ethiopia.

Downloaded From: https://bioone.org/journals/Journal-of-Vertebrate-Biology on 28 Mar 2024
Terms of Use: https://bioone.org/terms-of-use



Fig. 2. Group photo of participants of the 13th ASMS in Ethiopia.

Madagascar. For the first time there were also presentations about population and conservation genomics, niche modelling and a special session on subterranean rodents. The abstract book from this meeting is available at https://asms2019.ivb.cz/wp-content/uploads/12thASMS_Madagascar.pdf.

- **13th African Small Mammal Symposium, Mekelle, Ethiopia, 16-21 September, 2019**

The most recent conference, co-chaired by J. Bryja and Y. Meheretu, attracted about 100 participants (62 of them from Africa) from 23 countries represented (Fig. 1 and 2). It was co-organized by the Institute of Vertebrate Biology of the Czech Academy of Sciences, Czech Republic, and the Department of Biology of Mekelle University, Ethiopia. With about 100 oral and poster presentations presented, the meeting offered a range of research perspectives spread across a wide range of fields of African small mammal research (e.g. ecology and conservation, pest management, public health, phylogeography, evolution, taxonomy and systematics). Selected papers are published in this special issue of the Journal of Vertebrate Biology (focused on African Small Mammals). The abstract book from this meeting is available at https://asms2019.ivb.cz/wp-content/uploads/13thASMS_Mekelle.pdf.

Major trends in African Small Mammal Symposia

The major changes over the last 40 years reflect more general trends in biological research and development in Africa and can be summarized by following points:

Increasing number of participants: The first meeting hosted 40 researchers, while the most recent have had about 100-130 participants. The core group of senior researchers is relatively stable, but is increasingly supplemented by younger students and post-docs.

Organization of ASMS in Africa: Since 2003 in Morogoro, these meetings have become more African focused in terms of organisation and participation. This change is reflected by an increasing participation by African scientists (now regularly comprising more than 50% of participants; Fig. 3), which has been stimulated by collaborative projects and increased financial support. Meetings have also seen increased participation by female students and researchers, both African and non-African.

Broadening of the research topics and approaches: The original focus of ASMS meetings was on the systematics/taxonomy of poorly known and often cryptic African small mammal taxa. Later, research on the ecology of model groups and ecosystems began to appear. In the most recent meetings, there has been a shift in

Downloaded From: https://bioone.org/journals/Journal-of-Vertebrate-Biology on 28 Mar 2024
Terms of Use: https://bioone.org/terms-of-use

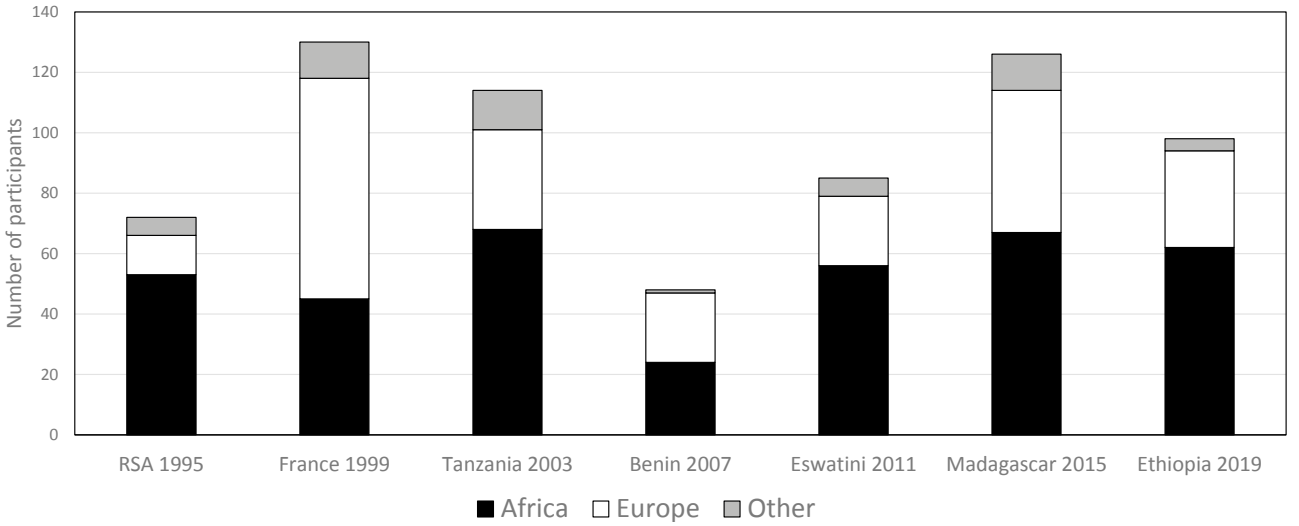


Fig. 3. Relative proportions of African/European/other participants at ASMSs from 1995.

both the scientific questions posed and the approaches used to answer them. For example, methods from molecular genomics, geometric morphometry and population genetic modelling are now routinely used to understand the evolutionary processes driving African biodiversity. A combination of eco-physiological and experimental approaches has also helped to better understand the role of small mammals in African ecosystems. The important role of small mammals in interactions with humans is reflected in an increase in applied projects related to pest control and zoonotic diseases. Contemporary research on African small mammals is well represented in this special issue of Journal of Vertebrate Biology.

Some valuable initiatives that formerly existed have been lost. The African Small Mammal newsletter (edited by G. Bronner and P. Taylor, and later by C. Denys and L. Granjon) was formerly distributed among participants between conferences. A valuable function of the newsletter was to share an annotated address list (including research areas and taxa) of researchers working on African small mammals. Unfortunately, internet communication and social/scientific networks have only partly replaced this effective mode of communication. We feel that such a platform, working at a pan-African scale (primarily for the benefit of active African researchers) could be useful, not only for knowledge sharing on fundamental research, but also for its wider application in agriculture, biomedicine or nature conservation. The protection of African biodiversity seems to be a particularly pressing task and some level of coordination of research activities might be helpful; e.g. through facilitation of well-designed field research. As Adam Ferguson (Field Museum of Natural History, Chicago) writes in his contribution to this special issue: "*Creating a consortium of interested scientists involved in collecting African mammals, or any museum specimens for that matter, could go a long way towards developing strategic mechanisms for coordinated sampling and deposition of voucher specimens for current and future studies. Developing such a network, even if only in digital space, has the capacity to facilitate active collecting of voucher specimens across the continent through shared experiences, coordinating sampling efforts, and creation of a unified voice in support of collecting for NHMs*".

Thus, research on African small mammals appears buoyant, with a growing confederation of active researchers who are making valuable and interesting discoveries that will ensure the successful continuation of ASMS. The next meeting planned in 2023 will be held in Namibia.

Downloaded From: https://bioone.org/journals/Journal-of-Vertebrate-Biology on 28 Mar 2024
Terms of Use: https://bioone.org/terms-of-use