These proposals are a combination of projects proposed for the previous trips and new projects. Some were actually carried out in these previous trips, but given the field class character of the trip, there is nothing against repeating some of the projects. If students have proposals of their own, they are very welcome. Let us know what you had in mind by email and we will discuss the feasibility of your proposal.

Details of each micro-project will be discussed with the participants of the subjects. Each micro-project is intended for ± 5 Flemish participants. For each microproject, a supervisor is identified that can assist the students in developing their project plan. In the field, each microproject will be supervised also by one of the UAntwerp or SUA (Sokoine University of Agriculture, Morogoro) staff members that will accompany the field class. Assisting technical staff is available through SUA.

Credit (3 ECTS) for the field class can be obtained by participating in the general preparatory meetings before the trip, preparing a microproject, participating in the trip, carrying out a microproject during the project and presenting a poster (detailing activities and preliminary results of the microproject).

Participating in the field class counts as a "stage" in Ba3. Students starting the Antwerp Master in Biology program next academic year, can include the trip as an elective course ("keuzevak") in their Ma-program.

Students currently in Ba2, can also use the microproject as a basis for the project work ("projectwerk") in Ba3 (additional 3 ECTS); in this case a more extensive report of the microproject will be expected (on top of the poster), including more intensive preparations (some literature study), additional processing of the collected materials upon return after the trip (in collaboration with one of the research groups in the department), statistical analysis of the data where appropriate and discussion of the results. **Note that not all the microprojects below are suitable for extension to a project work. Projects are designated as suitable for project works (PW) and/or for the “tropical class” (TC).**

**Proposed microprojects** (organised per taxon, because of the practicalities of the fieldwork):

1. **VERVET MONKEYS**
   
   1.1. Kinematics of bipedality in Vervet monkeys. Animals will be videotaped when walking bipedally, after which their movement will be digitalised and kinematically analysed. (PW)
1.2. Foraging dominance of Vervet monkeys. Through observations, an assessment of dominance (who is allowed the best food, who gets priority) is made. (TC)

2. RODENTS

2.1. Personalities in multimammate mice. Nothing is known about the existence and type of personalities in the most common mouse species of sub-Saharan Africa. Through observations, the repeatability of basic behavioural traits like aggressiveness, boldness, etc. will be assessed. (TC/PW)

2.2. Activity and personalities in multimammate mice. (TC/PW)

2.3. Dominance in multimammate mice. Recent findings suggest that dominant multimammate mice make scent marks, although this species is assumed to be non-territorial and promiscuous. This project will test these findings in an experimental Y maze setting, using wild-caught rodents. (TC/PW)

2.4. Female preference for mouse males of own lineage. There are two distinct lineages of multimammate mice in Tanzania, and we see signs of counter selection on lineage hybrids in nature. Can females detect the right lineage to mate with? We test this in a Y maze setting using wild caught rodents. (TC/PW)

2.5. Cognition in multimammate mice. Multimammate mice can quickly learn how to find their nest in a maze. But what happens when the nest then is placed somewhere else? (TC/PW)

2.6. Rodent macroparasites (“helminths”). Which host characteristics (age, body condition, sex, etc.) affect risk of infection? We dissect wild caught rodents in Tanzania and determine helminth species in Belgium using molecular techniques. (TC/PW)

3. ENTOMOLOGY

3.1. Syrphidae taxonomy: we capture hoverflies in various natural settings, classify them based on morphological features in Tanzania, and extend this classification using molecular techniques in Belgium (TC/PW)

3.2. Lepidoptera taxonomy: we captured butterflies and moths in various natural settings, classify them based on morphological features in Tanzania, and extend this classification using molecular techniques in Belgium (TC/PW)

3.3. Do herbivore insects avoid food sources that are marked with feromones by the ant Oecophylla longinoda without its physical presence? (TC/PW)

3.4. A comparative study of prey selection by Oecophylla longinoda in different habitats. (TC/PW)

4. BIRDS

4.1. Interindividual variation in sound profile of birds. We will make sound recordings of bird songs (PW/TC).

4.2. Behavioural observations of individually marked cattle egrets. What are the advantages/disadvantages of following cattle for foraging? Who gets the best spot in the “foraging train”? (TC)

4.3. Cattle egrets (Bubulcus ibis) Stress-sensitivity and pecking-efficiency. (TC/PW)

4.4. Influence of observation time on number of observed bird species. How long do you need to count to get a good estimate of bird diversity? (TC)
4.5. Haemoparasite prevalence (avian malaria-causing *Plasmodium* parasites) in different bird species in different habitats. Does malaria risk increase as habitats get more moist? Does this affect bird density/diversity? (PW/TC)

4.6. Interactions at feeding sites between the native African Pied Crows and the invasive Indian house crows. Who wins when there is competition over resources? (TC/PW)

5. **REPTILES**

5.1. Territoriality and aggressiveness of the African Striped Skink. (TC/PW)

5.2. Anti-predation behaviour in the African Striped Skink. (TC/PW)

5.3. Response to chemoreception in the African Striped Skink. (TC/PW)

6. **PLANT STUDIES**

6.1. How heterogeneous is a tropical landscape in terms of microclimate in space and time? Where are the “hotspots” and where is the environment more buffered? (TC/PW)

6.2. How deep are the edges of landscape fragments of different size, shape, and vegetation type in terms of microclimate (light, temperature, humidity)? At what point within fragments do conditions become stable? (TC/PW)

6.3. Drought stress in maize plants. Determining leaf growth, cell length and cell width (using microscopes) and oxidative capacity (by performing a small lab experiment) of maize plants growing under contrasting water availability. (TC/PW)

6.4. Effects of plant groups and local humidity on the mycorrhiza-fungi community. (TC/PW)

7. **ENVIRONMENT**

7.1. Does the macroinvertebrate/diatoms community change before and after the city of Morogoro and what is the water quality based on an assessment of the macroinvertebrate/diatoms community. (TC/PW)

7.2. Micropollutie in Morogoro rivers. (TC/PW)