

# The pollinator information network newsletter



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## Welcome to the first issue of volume 6 of the *Pollinator Information Network Newsletter*

The *Pollinator Information Network Newsletter* is one of the projected outputs of the “Diversity of Pollinating Diptera of the Afrotropical Region” project, a project funded by the Belgian Development Cooperation through the framework agreement with the Royal Museum for Central Africa. The first phase of the project will end this year but the project will continue for another five years. More on this in the forthcoming issues!

In this issue, we announce the 12 participants of our fifth training course on the Taxonomy and Systematics of Pollinating Diptera, which will take place from 16-28 October in Morogoro, Tanzania. Watch our Facebook page (see below) for pictures on the planned activities! At least two more training courses are planned: one in 2025 in South Africa and a second one in 2027 in either Burundi or Rwanda.

Two of our colleagues, Genevieve Theron of the KwaZulu-Natal Museum and Cassandra Barker of Stellenbosch University report on their fieldwork in the amazing Namaqualand (South Africa).

John Midgley of the KwaZulu-Natal Museum and Jessica Gird of the Karkloof Conservancy Centre report on teaching activities in three farm schools in the Karkloof area in the province of KwaZulu-Natal (South Africa). Such “science for society” activities will become increasingly important in the forthcoming years of the DIPoDIP project.

We invite everyone interested to submit relevant information for the Newsletter, including summaries of their own research and projects on pollination biology – or publications that they want to see highlighted, relevant literature, upcoming conferences and symposia, possibilities for cooperation and grant applications related to plant-pollinator networks, etc., before the 15th of November 2023.

Enjoy reading!  
the DIPoDIP team

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## The DIPoDIP project now has its own Facebook page!



follow us on Facebook

<https://www.facebook.com/pollinatingdiptera/>





## Training course in taxonomy and systematics of African pollinating flies Morogoro, Tanzania 16-28 Oct 2023

The objective of our group trainings are to ensure, for the sake of the African scientists or the persons confronted with the problem, a basic training on the identification and ecology of African Diptera, The training consists of ex-cathedra courses on morphology, classification, identification, identification methods, collection methods, and conservation methods of Diptera, with a focus on the target families Syrphidae, Nemestrinidae and Calliphoridae *sensu lato*. Practical exercises were used to comment on, and test, the topics presented in the courses.

This year's participants come from eight different African countries:

- Stéphnaie Beaudeliane Kengni (Cameroon)
- Jarmaine Magoai (South Africa)
- Jenipher Tairo (Tanzania)
- Simon Muhayimana (Rwanda)
- Melanie de Morney (South Africa)
- Antoine Irakiza (Burundi)
- Happy Leonard (Tanzania)
- Donath Nkuriyikimana (Rwanda)
- Kelvin Kemei (Kenya)
- Arlène Ingabire (Burundi)
- Tanatswa Gara (Zimbabwe)
- Tewodros Mulugeta (Ethiopia)



## iNaturalist projects on Diptera of the Afrotropical Region



We have launched two projects in iNaturalist where you can upload true fly (Diptera) pictures from the Afrotropical Region. Throughout the DIPoDIP project we will help you to identify your flies. Check out the two links below!

<https://www.inaturalist.org/projects/diptera-of-burundi-and-rwanda>

<https://www.inaturalist.org/projects/flies-diptera-of-southern-africa>



More information:

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# Two Girls, One Bakkie: A fieldtrip into Namaqualand

Genevieve Theron & Cassandra Barker

For seven months of the year, Namaqualand appears to be a barren landscape with vast fields of sand interrupted by short, patchy vegetation – it is not the most inviting place during this time. However, this all changes during spring when the landscape comes alive with flowers and their pollinators.

At the end of August Cassandra Barker and Genevieve Theron went to Namaqualand, South Africa to find undescribed species of Nemestrinidae and a few genera of Bombyliidae. It was certainly a bumper year for flowering and the area had received record amounts of rain leading up to the trip. The rain was, however, not yet over and we spent more than one day indoors – pining, identifying, and writing - rather than collecting.

On good weather days we travelled to sites where the undescribed species of interest had been recorded before in the hopes of collecting fresh specimens for descriptions as well as molecular work. Some of these sites which were particularly fruitful were Port Nolloth and Groenrivier where Cassandra was looking for a new species of *Callynthrophora* (Bombyliidae). We found several interesting bombyliids, mydids, asillids and many, many tabanids that we caught in anguish after being bitten! An interesting site was a roadside picnic area between Garies and Kamieskroon; it had a beautiful, untouched field of flowers – the perfect fly food. However, when we returned to the site one afternoon and we saw that the lovely field of fly food was being munched by a herd of goats and we knew it was time to move on.



View from the pass between Kamieskroon and Lieliefontein (top). Cassandra taking a break from being bitten by horse flies at Groenrivier (bottom) © G. Theron

Namaqua National Park has multiple records of the undescribed nemestrinids species Genevieve was looking for and so we tried to pick a warm day with low wind. Unfortunately, it was still rather windy the day we arrived at the park but we found a huge patch of fly food. As one would expect, there were one or two nemestrinids attempting to fly in the wind there - just not the ones we were looking for. We are so grateful to Oscar Osberg who gave us permission to sample in the park and to the SANParks ranger who accompanied us in the field.

In the evenings and on rainy days we spent many hours trying to identify bombyliids to genus level for a project on global Bombyliidae phylogenetics that is being headed by Dr Xunchuan Li. It was frustrating trying to acquaint ourselves with a key neither of us was very familiar with, but the hard slog paid off and we managed to collect a number of genera necessary for the project. All in all, it was not the most prolific trip but still provided a few useful specimens for more than one project.

Genevieve Theron is a postdoctoral fellow at the KwaZulu-Natal Museum (South Africa). She works on the taxonomy, phylogeny, and ecology of a variety of Diptera families, including Nemestrinidae and Acroceridae. Cassandra Barker is a PhD student at Stellenbosch University (South Africa). She works on the taxonomy, phylogeny, and ecology of several genera of the family Bombyliidae.



Genevieve examining her net in a field of daisies outside Port Nolloth (top) © C. Barker. From a distance, the fields of orange flowers in Namaqualand National Park looked like red sand dunes (bottom) © G. Theron



# Rural schools outreach in KwaZulu-Natal

John Midgley & Jessica Gird

The DIPoDIP project (<https://www.pindip.org/dipodip>) is not your usual research project. While a main drive of the project is research, another component is engaging with stakeholders to increase the relevance of the project. Stakeholder is a bit of a vague term, but it includes any person or organization that has an overlap in interests with the DIPoDIP project. One such stakeholder is the Karkloof Conservancy (<https://karkloofconservation.org.za/>), which champions conservation practices in the Karkloof area of KwaZulu-Natal, through community projects, environmental education and related activities. The KwaZulu-Natal museum also has a strong education outreach program, and this overlap allowed the two organizations to team up for some lessons in local farm schools.

There are three farm schools in the Karkloof area, Triandra Farm School (33 learners), Hawkstone Primary School (67 learners) and Yarrow Intermediate School (60 learners), which were visited over two days in September 2023. The schools cover a range of grades and classes typically include multiple grades at once, which presents teaching challenges. The quality of schooling in South Africa differs drastically from school to school, and farm schools battle to provide quality education without input from organizations like the Karkloof Conservancy. The Karkloof Conservancy raises funds to visit these farm schools on a regular basis (since 1998) in order to provide meaningful supplementary education, aligned with the national curriculum. Hands-on environmental education is weaved into all subjects. Educators at these schools are always grateful for the support and exposure.



Setting up the presentation at Triandra Farm School under the watchful eyes of the expectant class (top). John and Jessica with the staff of Triandra Farm School after the talk (bottom). © J. Gird

Speaking after the visits, the Karkloof Conservancy said: *“We are extremely grateful to the DIPoDIP project for coming out to visit all three farm schools in the Karkloof. Many of the learners have not and may never have the opportunity to experience an outing to the Museum or any such place due to the distance and costs involved. So bringing the experience into the classroom has been hugely beneficial and much appreciated. John is an excellent speaker and brings the subject to life. Thank you to you and your team for sharing your knowledge and passion for flies with all of us.”*

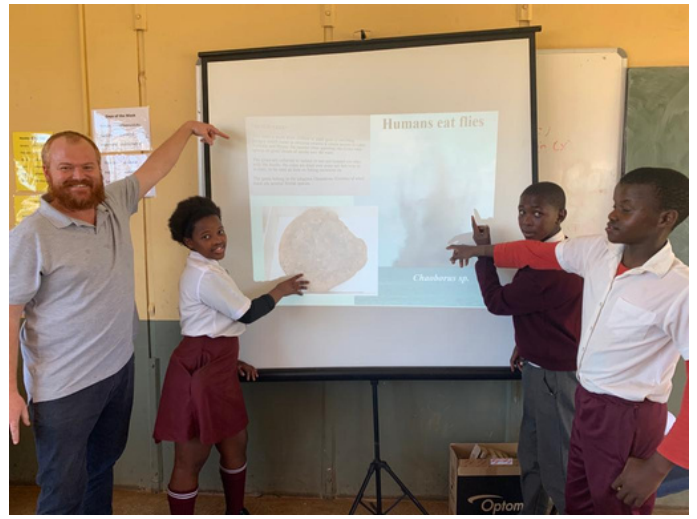


John talking to the students at Hawkstone Primary School with the help of the school staff translating into isiZulu as needed (left). John talking about pollinating hover flies at Triandra Farm School with the school staff translating (right) © J. Gird



The visits started out with Jessica warming up the crowd with some quick activities to get them engaged, before John took over and gave a talk about flies, touching on their incredible diversity (160 000 described species but estimated to be over 1 600 000) and following on with feeding habits and their importance in the ecosystem. The final part of the talk focusses on fly pollination, tying back to the DIPoDIP project. One of the DIPoDIP products is also a travelling display about fly pollination which was donated to the Karkloof Conservancy. Jessica will do follow up visits to the school with these displays to give further lessons on the importance of these pollinators to build on the first round of lessons.

John Midgley is Assistant Director at the KwaZulu-Natal Museum (South Africa) and is a partner in the DIPoDIP project. Jessica Gird is a co-ordinator of the Karkloof Conservancy Centre. The Karkloof Conservancy is made up of local farmers, foresters and landowners interested in protecting the biodiversity in the Karkloof. The Karkloof Conservancy Centre is one of the major stakeholders of the DIPoDIP project.



John with students at Yarrow Intermediate School. The students were amazed at the idea that flies were edible for humans. © J. Gird

## Terence Bellingan visits the KwaZulu-Natal Museum

John Midgley & Terence Bellingan

In addition to partners and students, the DIPoDIP project has a network of stakeholders and associated researchers who help with various aspects of the project. Researchers working on topics related to the project collaborate on research, which involves visiting collections managed by project partners. In October 2023, Dr Terence Bellingan, Curator of Entomology at the Albany Museum visited the KwaZulu-Natal Museum for such a visit.



Getting to grips with the collection of Brachyopini from Lesotho



Terence examining specimens in the KwaZulu-Natal Museum collections



The main focus of the visit was to work on the Brachyopini of Africa. This group included species that visit flowers at high altitudes, and recent collections from Lesotho have yielded a large collection of these insects. Terence managed to identify the majority of the material during his visit, which will feed into a broader review of the tribe in Africa. Recent fieldwork funded by the DIPoDIP project has also resulted in biological observations of various groups, and Terence made progress on the documentation of the feeding behavior of the flag mantis observed in St Lucia during field work. While the focus of the DIPoDIP project is South Africa, many relevant genera occur in other countries in Africa as well. Terence also brought a collection from Angola which was sorted and identified. Interesting species from this collection will be included in future taxonomic revisions.



Male *Orthonevra* (Diptera: Syrphidae) specimen from the Eastern Cape, collected by the authors on February, 2022



## The DIPoDIP and DIPoDIP2 projects

The “Diversity of pollinating Diptera in South African biodiversity hotspots” project (DIPoDIP) is a five year project (2019-2023) financed by the Belgian Directorate-general Development Cooperation and Humanitarian Aid through a framework agreement with KMMA. It is a collaboration between the University of KwaZulu-Natal (UKZN), the KwaZulu-Natal Museum (KZNM), Stellenbosch University (SU), the South African National Biodiversity Institute (SANBI), and the Royal Museum for Central Africa (click on the logos for more information). It will be continued as the “Diversity of pollinating Diptera in Afrotropical biodiversity hotspots” (DIPoDIP2) project in the following five years (2024-2028) and will have additional partners from Burundi and Rwanda. Read more on the project in the forthcoming PINDIP *Newsletters* and on our Facebook page!  
<https://www.facebook.com/pollinatingdiptera/>

