

DLS MPhil/PhD students' research

Quarterly Digest #3: October 2023

What's new?

See below for the latest publications, conference participations, awards and other achievements in the period July - September 2023.



On her way out of DLS, currently under examination for the award of a PhD

Aarti Pustam, PhD Microbiology

- ❖ **Pustam, A., Jayaraman, J., Ramsubhag, A. (2023)** Comparative genomics and virulome analysis reveal unique features associated with clinical strains of *Klebsiella pneumoniae* and *Klebsiella quasipneumoniae* from Trinidad, West Indies. PLoS One 10, 18:e0283583. [doi: 10.1371/journal.pone.0283583](https://doi.org/10.1371/journal.pone.0283583)

- ❖ CETL Certified in August 2023



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On his way out of DLS, currently under examination for the award of a PhD

Omar Ali, PhD Microbiology

- ❖ Delivered a talk during the Planthealth 2023 in August.

- ❖ Completed a REDD+ (Reducing Emissions from Deforestation and Forest Degradation) fundamentals course in September 2023.



Congratulations

Renoir Auguste, PhD Environmental Biology Candidate

co-authored a paper in Nature

Ongoing declines for the world's amphibians in the face of emerging threats

<https://doi.org/10.1038/s41586-023-06578-4>

Received: 16 January 2023

Accepted: 25 August 2023

Published online: 04 October 2023

Open access

 Check for updates

Systematic assessments of species extinction risk at regular intervals are necessary for informing conservation action^{1,2}. Ongoing developments in taxonomy, threatening processes and research further underscore the need for reassessment^{3,4}. Here we report the findings of the second Global Amphibian Assessment, evaluating 8,011 species for the International Union for Conservation of Nature Red List of Threatened Species. We find that amphibians are the most threatened vertebrate class (40.7% of species are globally threatened). The updated Red List Index shows that the status of amphibians is deteriorating globally, particularly for salamanders and in the Neotropics. Disease and habitat loss drove 91% of status deteriorations between 1980 and 2004. Ongoing and projected climate change effects are now of increasing concern, driving 39% of status deteriorations since 2004, followed by habitat loss (37%). Although signs of species recoveries incentivize immediate conservation action, scaled-up investment is urgently needed to reverse the current trends.

Luedtke, J.A., Chanson, J., Neam, K. et al. <https://doi.org/10.1038/s41586-023-06578-4>

DLS PhD Oral examination

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Caleb Lewis, PhD Biochemistry
27 September 2023



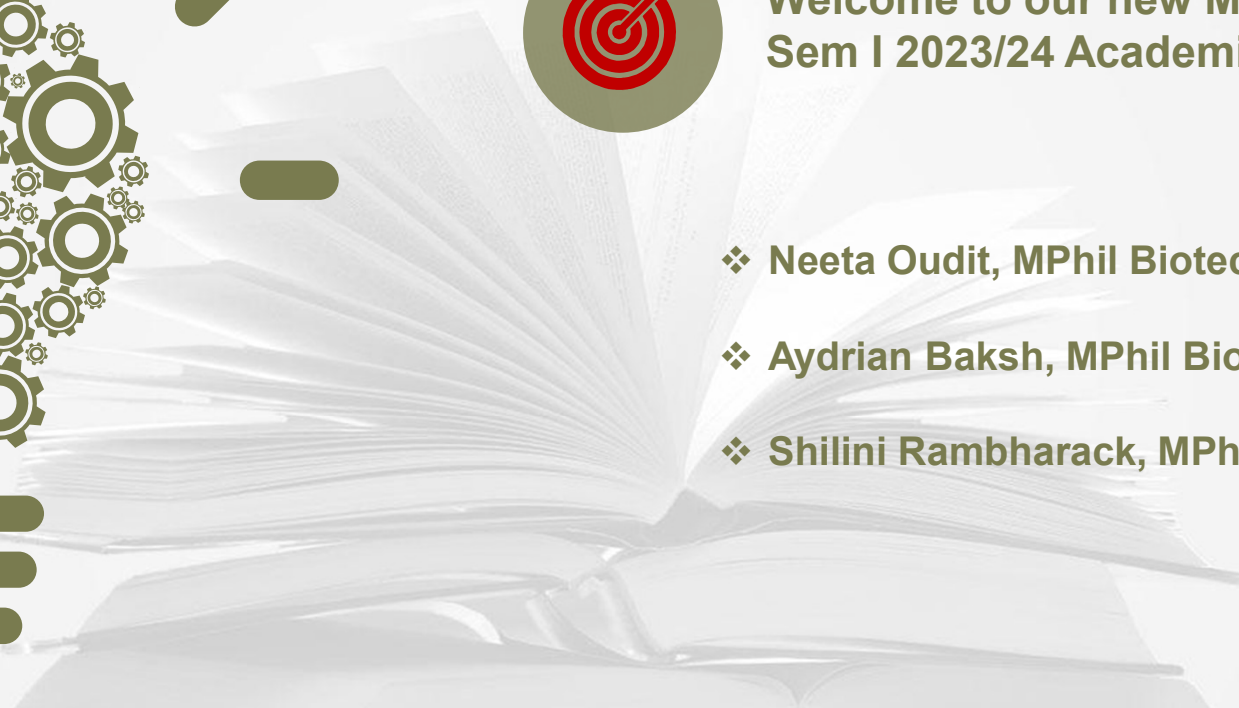
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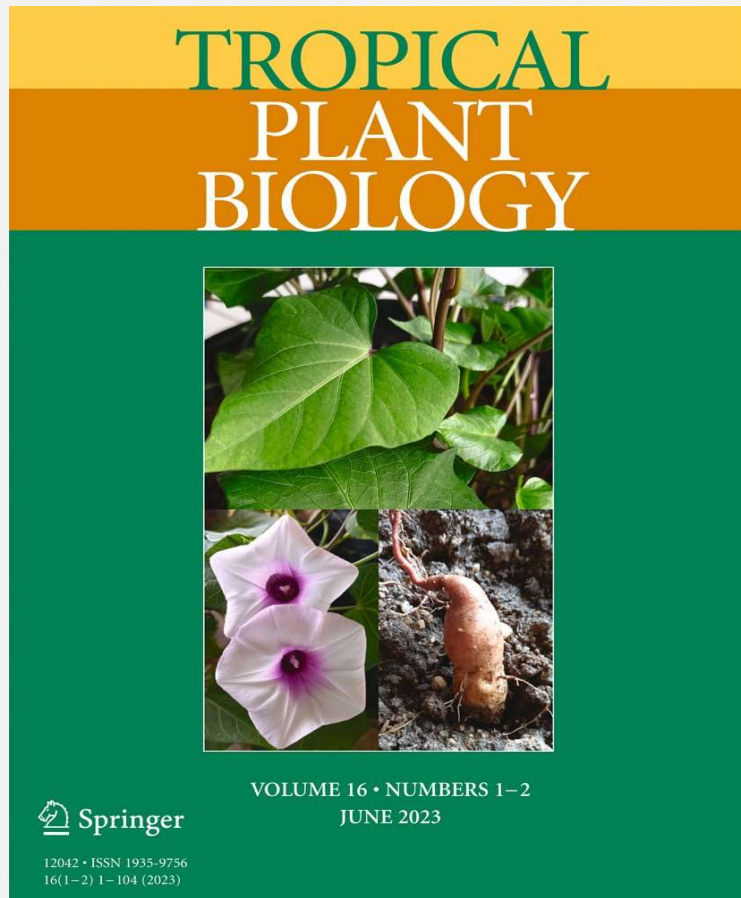
**Welcome to our new MPhil students
Sem I 2023/24 Academic year**

- ❖ **Neeta Oudit, MPhil Biotechnology**
- ❖ **Aydrian Baksh, MPhil Biochemistry**
- ❖ **Shilini Rambharack, MPhil Plant Science**



Congratulations

Sarah's work is featured as a journal cover



Caption:

Sweet potato is the sixth most important food crop worldwide. It is vital to understand the mechanism of storage organ formation in this crop, to help improve yields. Auxin is a plant phytohormone that is crucial for tuber initiation in sweet potato. Auxin exerts its effects via its polar transport by auxin transporters. Therefore, it is important to understand the roles of auxin transporters during tuber formation. In this issue, Mathura et al. performed a genome-wide identification of the PIN, PILS, Aux/LAX, and ABCB auxin transporters in the sweet potato genome, and analyzed their expression during tuberization and in different plant parts at various stages of development. The image shows (top) sweet potato leaves; (lower left) sweet potato flowers; and (lower right) a developing sweet potato.

Photo credits: Sarah R. Mathura
Cover design: Sarah R. Mathura

Congratulations

Omar Ali, PhD Microbiology Candidate



National Youth Award
(Agriculture)
September 2023



Special Mention - Congratulations

Former DLS Student

Farrah Mathura, MPhil Biochemistry

receives



National Youth Award
Individual Open 10 to 35 years
Category: STEM
September 2023

<https://www.mydns.gov.tt/media/releases/youth-ministry-honours-youth-excellence-at-2023-awards/>