

# Training support for Durban University of Technology horticulture students



- Since April 2021, the SANBI funded Sentinel Plant Project in collaboration with the Department of Horticulture at the Durban University of Technology (DUT) has continued in providing training support for Postgraduate and Advanced Diploma students.
- The training support was rendered through a tailor made training workshop, practical demonstration of plant health assessment and sampling methods, and isolation techniques.
- The project is also providing support in the identification and guidance of student research projects.

# Support for the preparation and launch of biosecurity best practices guide for botanical gardens



## GUIDE TO BIOSECURITY BEST PRACTICE IN SANBI NATIONAL BOTANICAL GARDENS

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- To aid the implementation of biosecurity best practices in South African botanical gardens, the SANBI funded Sentinel Plant Project provided significant support in the preparation of “Biosecurity best practices guide for SANBI botanical gardens”. The guide is being prepared through the initiatives of Horticultural Enrichment Forum (HEF) under the leadership of horticulturists from Kirstenbosch National Botanical Gardens.
- Currently, the preparation of the guide is at its final stage.
- A plan is in progress to launch the guide through a training workshop targeting curators and estate managers who will in turn train horticulturists in the different gardens.



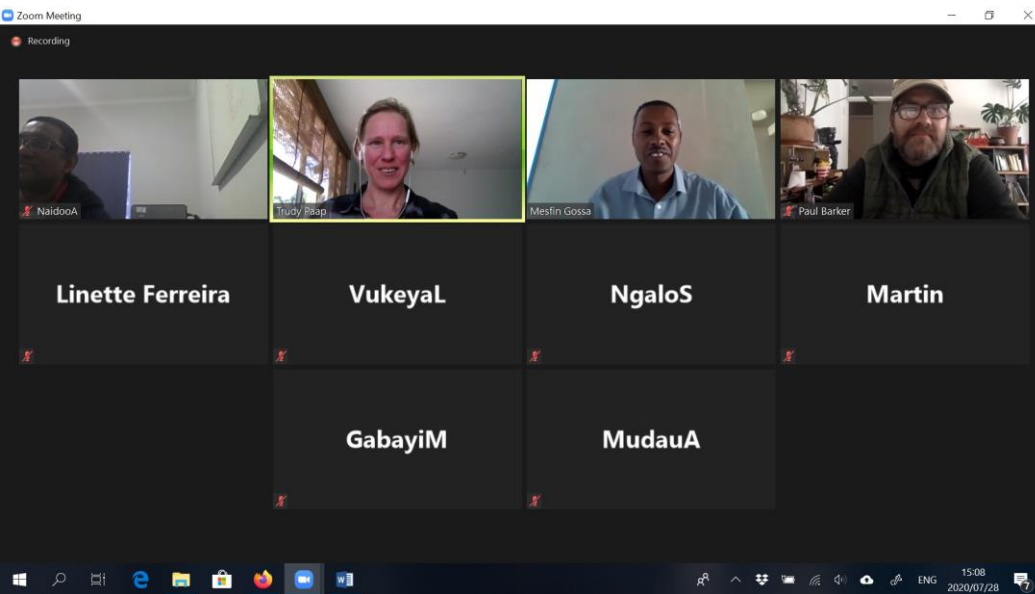


# Phosphite treatment trial to mitigate *Phytophthora* die-back in silver trees

- *Phytophthora cinnamomi*, the causal agent of root and collar rot in many plant species is threatening the South Africa's iconic silver tree, *Leucadendron argenteum*.
- To mitigate the damage caused by *P. cinnamomi*, the SANBI funded Sentinel Plant Project in collaboration with horticulturists at Kirstenbosch National Botanical Garden (NBG) have set up a phosphite treatment trial in November 2020.
- The team is very excited about the first use of this treatment on indigenous South African flora – and optimistic that the trials will confirm that treating with phosphite can safeguard the health of this iconic tree species.



# A webinar on plant health in botanical gardens



- In July 2020 (amid the Covid 19 pandemic), Drs Mesfin Gossa and Trudy Paap hosted a webinar titled “Plant health in botanical gardens in South Africa”.

- Horticulturalists, curators and managers from various botanical gardens attended the webinar.

**The value of botanic gardens for P&P surveillance**

- Botanic gardens present a unique opportunity for surveillance and monitoring
- Over 3,000 botanic gardens world wide
- House diverse collection of native and exotic plants (critically endangered, extinct in the wild) – >1/3 of the known plant species
- Located close to high-risk areas and natural ecosystems (world heritage sites)
- South Africa has many botanic gardens widely distributed in the country

Map of botanic gardens world wide courtesy of BGCI's GardenSearch database [http://www.bgci.org/botanic\\_gardens.php](http://www.bgci.org/botanic_gardens.php)

Map of South Africa showing locations of botanic gardens: Pretoria, Lowveld, Walter Sisulu, Free State, KwaZulu-Natal, Hantam, Kirstenbosch, Karoo Desert, Harold Porter.

- Topics of discussion included the global burden of pests and pathogens on plant health, factors that exacerbate pest and pathogen threats, knowledge gaps on emerging alien and native pests and pathogens, the importance of surveillance and monitoring and the value of botanical gardens as sentinel sites for pest and pathogen surveillance.

- Despite the challenges posed by the Covid 19 pandemic, the webinar has provided garden staff and researchers the opportunity to engage.



# Plant health seminar for SANBI Interpretation Officers

- In October 2019, Drs Mesfin Gossa and Trudy Paap presented a seminar at SANBI Interpretation Officers meeting in Lowveld National Botanical Garden.
- The major topics included in the seminar include the importance of pest and pathogen surveillance in botanical gardens, update on Polyphagous Shot Hole Borer (PSHB) invasion in South Africa and best garden practices.



# A seminar on seasonal plant sale day at Free State National Botanical garden

- In September 2019, Dr Mesfin Gossa presented a seminar on a seasonal plant sale day in Free State National Botanical Garden.
- The seminar covered various topics, including the value of botanical gardens for pest and pathogen surveillance, and updates on the invasive the Polyphagous Shot Hole Borer (PSHB) invasion in South Africa.
- The seminar was followed by a guided tour in the garden and demonstration of best garden practices. Garden practices that need improvement were also identified and possible options for improvement were suggested.
- Twenty two people, including the curator, estate managers, horticulturists, interns and garden practitioners attended the seminar and the practical demonstration.







# A seminar on the invasive Polyphagous Shot Hole Borer (PSHB) and other emerging plant diseases



- In June 2019, Drs Mesfin Gossa and Trudy Paap visited Kirstenbosch National Botanical Garden to assess plant health in the garden.
- In addition to the plant health assessment, Dr Paap gave a seminar on the invasive ambrosia beetle (the Polyphagous shot Hole Borer) and other emerging plant diseases in the garden.
- Twenty six people, including estate managers, horticulturists, interns and garden practitioners attended the seminar





# Plant health assessment in South Africa's botanical gardens



- Demonstrations on damage caused by pests and pathogens, plant health assessment methods, and sampling techniques are being conducted in various botanical gardens and the Pretoria National Zoological Garden in South Africa.
- This is a continues capacity building activity for the gardens.
- Over 100 people, including horticulturists of the gardens, students, interns, city park and government department staff have so far attended and benefited from the demonstrations.



# International Plant Sentinel Network (IPSN) workshops in three South African botanical gardens



- In November 2017, Dr Trudy Paap in collaboration with Dr Chris Malumphy, a senior entomologist with Fera Science in the United Kingdom hosted an International Plant Sentinel Network Workshops in three South African botanical gardens, namely KwaZulu-Natal, Kirstenbosch and Pretoria National Botanical Gardens.
- Various topics in plant health, including the importance of sentinel plants and biosecurity, alien invasive pests and pathogens and best practices in garden maintenance were covered during the workshop. More than 120 delegates attended the workshop.



# A workshop on *Phytophthora* isolation and biosecurity and hygiene in botanical gardens



- In November 2016, a workshop on 'Sampling and isolation of *Phytophthora*, and biosecurity and hygiene in the gardens' was held in Harold Porter and Kirstenbosch National Botanical Gardens and Stellenbosch University Botanical Garden.
- A total of 40 horticulturists attended the workshop.