

ESTUARINE ENDEAVOURS

Knysna Basin Project Newsletter
April 2021

GENERAL NEWS

Following the resignation of our Director Dr Louw Claassens in May last year and the simultaneous emergence of Covid restrictions, the Trustees of the Knysna Basin Project considered it prudent to defer appointment of a replacement for Louw and focus on completing current projects and offering support for ongoing research conducted through other institutions.

As Covid restrictions seemed to ease toward the end of the last year we began work on new projects, one with support from Thesen Islands Homeowners Association and the second with a number of researchers and guidance from Mark Read. These initiatives are elaborated in this report.

COLLABORATION

The Knysna Basin Project encourages and enables researchers to conduct studies on the estuary and its surrounds by providing facilities and assistance.

University of Stellenbosch

We continue to provide laboratory support for three researchers who are studying baitworms (Polychaetes). They have agreed to give presentations as Covid restrictions ease.

One student Stephanie Schoeman is resident in Knysna for the year. With Mike Davies' help and using KBP boat (supported by Leisure Isle Boat Club), Stephanie and another student from Rhodes University, Jessica Seath, now have their Skippers Licenses.

Stephanie is assisting us implement the Agreement with Thesen Islands Homeowners Association (see below). She is doing an excellent job and reports water quality twice monthly to TIHOA.

Rhodes University

Our Educator Empowerment Project funded by the Table Mountain Fund, is conducted by Environment Learning and Teaching in association with Rhodes University.

Nina de Villiers completed her Master's Degree towards the end of last year: Ecological Engineering: an assessment of the ecological impact of Reno mattress structures used in erosion control in the Keurbooms Estuary, South Africa.

Thesen Islands Homeowner's Association Agreement

The two principal objectives of this Agreement are:

1. Develop and implement a directed water quality monitoring programme that informs the continuance of Blue Flag status for Thesen Islands. This objective is being met by the water sampling and reporting protocol implemented by Stephanie Schoeman. The focus is E. coli as an indicator of faecal pollution
2. Develop and implement a graduate research project directed toward a conservation and sustainability matter that is of interest for TIHOA, KBP and the wider Knysna community. The Agreement specifies that the research should be directed at the role of the Thesen Islands channels as a refuge/nursery for fish. To gain such understanding it is necessary to contextualise the channels within the estuary as a whole. Last year Rhodes University and SANParks completed an analysis of estuary fish data from some years back and were looking to update with sampling in 2021. This provided the opportunity for the TIHOA/KBP bursary to support Rhodes University and SANParks and to link the channel fish study into a wider initiative.

While water quality reporting is central to retaining Blue Flag status, the Blue Flag reporting criteria include broader environmental reporting and field activities. The researchers in this project will be offering talks and field experiences and these are scheduled to start in May.

Educator Empowerment Project

The Educator Empowerment project funded by the Table Mountain Fund and WWF South Africa, and conducted by Janet Snow of Environment Learning and Teaching, offers a Fundisa for Change Course for Intermediate Phase teachers. It is conducted in association with Rhodes University and the focus is on Marine Biodiversity.

Lockdown required us to develop an innovative Blended Learning approach to distance learning. Blended Learning refers to the practice of using both online and in-person learning experiences when teaching. To enhance the effectiveness of online learning we have supported the development and operation of four 'Professional Learning Communities' through which thirteen educators are enabled to support each other and learn together. Our intention is that experience of learning together will have facilitated long-term behavioural change such that co-learning becomes a way of life.

A comprehensive evaluation of the project will be conducted in the second half of the year.

Hlelokuhle River Clean-Up

As the title conveys this community-based initiative is directed at keeping the watercourses and general environment free of litter and garbage through both direct action which sets the example, but also through education directed at long-term behavioural change.

The initiative is led by Andile Nkulana and has in principle support from Pam Booth (Manager: Environmental Planning, Knysna Municipality) and Noluthando Nakani (Youth Community Outreach Coordinator, Knysna Municipality). The project is in its early stages and we are assisting with advice and preparation of the proposal.

Natural Wonders of the Knysna Estuary – A Priceless Jewel in the Garden Route Crown

Acknowledging the need to promote care and build support for the Knysna estuary, and encouraged by Mark Read, we are writing a book that will provide a richly illustrated, easy to read reference text for residents and visitors. The book builds on the Guide to the Common Shore Creatures of the Knysna Estuary authored by Frances and Peter Smith.

The book will be edited by Professors Alan Whitfield and Charles Breen and each chapter will be authored by acknowledged experts many of whom have already indicated support for the project.

Draft Table of Contents

Chapter 1 – Our ancient links to the Garden Route (Palaeontological history of human occupation of the Knysna/Brenton on Sea/Garden Route area).

Chapter 2 – Footprints cast in stone (An account of the Holocene sandstone footprints of humans, elephants, antelopes, giraffe, crocodiles, rodents and birds from the Knysna to Wilderness coastal zone).

Chapter 3 – Holocene evolution of the Knysna Estuary (Examination of the changing estuary over the last 100 000 years caused by sea level rise and fall).

Chapter 4 – Meeting place of river and sea (A focus on the tidal regime, hydrodynamic features and nutrient characteristics of the modern Knysna Estuary).

Chapter 5 – The role of plant habitats in the functioning of the Knysna Estuary (Focus on phytoplankton, benthic algae, eelgrass beds and saltmarshes).

Chapter 6 – Invertebrates of the Knysna Estuary (Focus on zooplankton and invertebrates of eelgrass beds and intertidal sand and mudflats).

Chapter 7 – Fishes of the Knysna Estuary (Focus on the nursery function of the estuary for fishes as well as the life cycles of angling species and the iconic Knysna seahorse).

Chapter 8 – Birds of the Knysna Estuary (Focus on the different categories of birds using the estuary, both resident species and migratory waders).

Chapter 9 – Climate change, connectivity and the Knysna Estuary (Focus on global warming and sea-level rise and what this means for the biotic integrity, connectivity, ecology and people of the estuary).

Chapter 10 – Ecosystem management of the Knysna Estuary (Focus on management actions, plans and visions that are being implemented or envisaged to make the Knysna Estuary a better place for all, including aquatic plants, invertebrates, fishes and birds inhabiting the system).

Chapter 11 – The way forward (Summary of major points from the preceding chapters, as well as additional ideas from the editors).

LABORATORY

Our rental agreement for the Trotter Street Laboratory expires at the end of May. After consultations with the Knysna Municipality it seemed we were on course to relocate to the Queens Warehouse but in the final meeting, the Municipality decided against this option while indicating that we would work together to find another option. Fortunately, through our contract with TIHOA we have access to the Crofters Hut that Louw Claassens used to use. We also have access to the “WetLab” at SANParks.

THE FUTURE

Individually and collectively, we are responsible for ensuring that the Knysna estuary remains “The Priceless Jewel in the Crown of the Garden Route.”

What forces are directing change and how can we address these so that we protect our asset? This will require that while encouraging and enabling research, we must understand the estuary in the context of its basin and even beyond. We must understand the system.

If the KBP is to regain the momentum we had during Louw Claassens’ tenure and progress toward securing the state of the estuary in our rapidly changing environment, we will have to employ a full-time project manager.

APPRECIATION

This has been a challenging time and we are most grateful for all who have continued to support us in so many different ways.

This is your initiative. We welcome your suggestions, advice and engagement.

Contact: Charles Breen

Telephone: 0824541386

Email: breenc39@gmail.com

Website: www.knysnabasinproject.co.za

Facebook: <https://www.facebook.com/knysna.basin.project>

