

Africa's Earliest known Coelacanth

“Coelacanths are believed to have arisen during the Devonian Period, however only five species of reconstructable Devonian coelacanths have previously been described, in addition to a number of very fragmentary remains. None of these came from Africa.”

By Dr Rob Gess

Africa's earliest known fossil coelacanth species was described in September in the prestigious Zoological Journal of the Linnean Society by palaeontologists Dr Robert Gess, (who conducted the research whilst a PhD student at the University of the Witwatersrand) and Professor Michael Coates of the University of Chicago. The 360 million year old specimens were collected by Dr Gess from the famous Late Devonian-aged Waterloo Farm locality outside Grahamstown in the Eastern Cape. Coelacanths are believed to have arisen during the Devonian Period, however only five species of reconstructable Devonian coelacanths have previously been described, in addition to a number of very fragmentary remains. None of these came from Africa, but rather from North America, Europe, China and Australia. The new species *Serenichthys kowiensis* gives important additional information on the early evolution of coelacanths. It is the Devonian species that most closely resembles the lineage leading to modern coelacanths – according to an evolutionary analysis conducted by Gess and Coates.

The fossils come from black shales originally disturbed by road works at Waterloo Farm. These shales are the compacted remains of petrified mud, deposited in the quiet reaches of an estuary not unlike some of those along the Eastern Cape Coast today. Gess has collected more than 30 specimens thus far, and, remarkably, all of these more or less complete coelacanths are juveniles. This suggests that *Serenichthys* was using a shallow, waterweed filled embayment of the estuary as a nursery, as many fish do today. This earliest known record of a coelacanth nursery foreshadows a much younger counterpart, known from the 300 million year old Mazon Creek beds of Illinois in the United States. This glimpse into the early life history of ancient coelacanths raises further questions about the life history of the modern coelacanth, *Latimeria* – which is known to bear live young, but whether they, too, are clustered in nurseries remains unknown.

360 million years ago, Africa was part of the southern supercontinent Gondwana, made up of Africa, India, Australia, Antarctica and South America. At that time, the rocks of Waterloo Farm were forming along the shores of the semi-enclosed Agulhas Sea, not far from the South Pole.



Gess originally identified coelacanth remains from the locality whilst carrying out excavations at Waterloo Farm in the mid 1990s under the supervision of Dr Norton Hiller, of the Rhodes University Geology Department. These fossils were not, however, well enough preserved to be reconstructed and described. His painstaking excavation of tons of shale salvaged during subsequent roadworks has now shed light on dozens more specimens, a few of which are preserved in exquisite detail. These were prepared under a microscope and have allowed the species to be reconstructed in minute detail. They prove to be a new genus and species.

By a strange coincidence, the new species was discovered a mere 100 km from the mouth of the Chalumna River, off which the type specimen of *Latimeria chalumnae* (the first discovered modern coelacanth) was caught in 1938. Furthermore, the Geology Department at Rhodes, where Gess was based when he found his first fossil coelacanth, is on the site of the former Chemistry Department where *Latimeria* was first described. In keeping with the naming of its living relative (after an Eastern Cape river), the species name of the new fossil form, *kowiensis*, is after the Kowie River which rises among the hills where it was found, and the genus name, *Serenichthys*, honours Serena Gess, who provided land for the storage of more than 70 tons of black shale rescued from roadworks for ongoing research – in which all the new material was found.



Albany Museum is 160

By Linda Dyani

Allbany Museum - the second oldest museum in the country - is celebrating its 160th birthday this year. Curator Emeritus Fleur Way-Jones gave a talk on its history.

Here are some of the Museum's milestones so far.

11 September 1855 - A resolution was proposed by Hutton, and seconded by Edmunds (a group of doctors) for the establishment of a "General Museum". It was carried unanimously. Donations began to stream in and a room was provided by Dr W Edmunds in his home in Bathurst Street.

January 1856 - The specimens that had been received were listed under six divisions: Natural History, Native Manufacture, Anatomy, Physiology and Pathology, Geology and Mineralogy, Palaentology, Curiosities

February 1856 - The Albany Museum officially opened for the first time to the public in Dr Edmund's house on 2 and 4 February 1856. The numbers attending were 16 and 34 respectively, but within a few weeks the average attendance had grown to be 150 including a considerable number of young persons of both sexes".

1856 - Moves to secure new premises progressed rapidly as Dr Edmund's house was too small. The upper floor of stores owned by a Mr Temlet in Hill Street was secured, and the collections had been moved.

March 1856 - The Museum reopened on 17 March 1856.

December 1958 - Owing to financial difficulties a Board of Trustees was established to help with fund raising and a trust Deed was drawn up on the 14th December 1958.

1861 - Mr B Glanville declared to the Museum Committee that the Museum room was completely inadequate, and that "if some more spacious premises are not obtained, the efficiency of the Museum will be much impaired".

1864 - Plans for a new building to house the Museum, the Municipal Council and the Public Library were drawn up but due to lack of funding didn't go any further.

1867 - The Museum was granted a site on the north side of the Drostdy Gate.

1868 - The Museum moved into three rooms rented by the Town Council at No. 8 Bathurst Street (next to the present Frontier Hotel)

1873 - The Society continued to plan for a separate museum and prepared an appeal to the Government for 1000 pounds to aid in erecting a building.

1881 - The Museum moved into the top floor of the newly completed City Hall.

1870 - Mr B Glanville, the Town Clerk of Grahamstown was appointed as Secretary of the Literary Scientific and Medical Society and recognized as the Curator

1882- Mr Glanville's eldest daughter, Miss appointed as Curator, the first paid at the rate of 50 pounds per annum.

1887 - Queen's Jubilee Exhibition in Grahamstown and the Museum received over 25 000 visitors.

1889-1910 - Dr Selmar Schonland, a botanist from Frankehausen in Germany, arrived to take up the post of Curator of the Albany Museum. He was the principal creator of the Museum's herbarium. He ensured the employment of skilled taxidermists from Europe. Dr Schonland initiated the erection of a new building.

September 1897 - The Governor of the Cape Colony, Lord Alfred Milner, laid the foundation stone of the new museum.

1898 -1910 - Museum was largely completed by the end of 1898.

1902 - The new Albany Museum was officially opened with a golden key by Sir Walter Hely-Hutchison, the Governor of the Cape Colony on 22 January.

1910 - John Hewitt succeeded Schonland as Director and retired in 1958. He is commemorated by a wing of the museum and a gallery in his name.

1920 - Funding for an extension of a wing was granted, followed by another opened in 1940.

1936 - The Mobile Museum service started, with the construction of educational display cases which were sent off to rural schools by train.

6 September 1941 - A great fire broke out in the central, oldest section of the Albany Museum building.

1959-1965 - Further expansion during the directorship of Dr T. Barry .

1960 - Opening of the John Hewitt Wing.

1965 - Opening of the 1820 Settlers Memorial Museum.

1980's - Mr Brian Wilmot was the Director and 2200 square meter of floor space was added to the Natural History Museum to accommodate a large workshop, administration offices, the new library, the Archaeology, Entomology, Taxidermy and Exhibitions Departments and Herbarium. The Museum became an Affiliated Research Institute of Rhodes University in 1983.

1990's - With the change in government in South Africa, the museum no longer fell under the Cape Administration, but was placed under the jurisdiction of the Eastern Cape Department Sport, Recreation, Arts and Culture

1994 - Algoa Regional Services Council donated a panel van to the Museum to help the Education Department distribute school cases to rural schools.

2000 - The Khanya Maths club was launched for disadvantaged learners to meet at the museum on Saturday mornings.

2012 - National Lottery Distribution Fund donated a 14 seater bus to the Museum to carry out outreach programmes.



Manzi Vabaza from 2014 to present



Bongani Mjijima from 2009-2012



Dr Lita Webley from 1999-2008



Mary Glanville-First paid Cuurator



Burt Granville 1872-1882 (First Honorary Curator)



Selmar Schonland Director 1889-1910



JohnHewitt Director 1910-1958



C Jacot-Guillamrod Director 1965-1977



Brian Wilmot - Director 1977-1993



Wouter Holleman Director 1993-1999

New Book out!

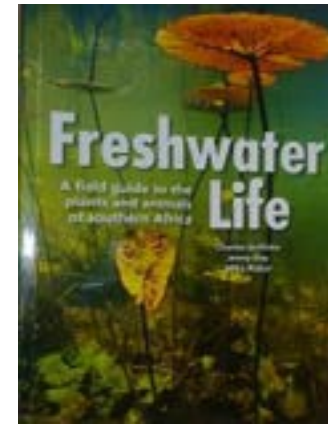


Photo: Linda Dyani

A new book, Freshwater Life, has recently been published by Struik. Dr Ferdy de Moor and Dr Helen James are both contributors to this, and have each written significant chapters for it. It is now available in book shops around the country. Dr James's chapter is on mayflies, and Dr de Moor's on caddisflies. Dr James is the Head of Freshwater Invertebrates, Dr de Moor is Curator Emeritus.

Department of Freshwater Invertebrates hosts a guest lecturer



Prof Appleton (seated) and the FWI team: from left to right Dr Helen-Barber James (HOD), Mr Bayanda Sonamzi (intern) and Mr Musa Mlambo. Photo: Linda Dyani

The Department of Freshwater Invertebrates hosted Professor Chris Appleton, a leading authority of African Malacology (study of snails and slugs). Prof Appleton gave a talk on 'Alien Invertebrates are invading South Africa's Rivers and Lakes' on 8th October at the Rennie Hall. The talk was attended by more than 40 people.

River biomonitoring and training course assessment

By Dr Helen Barber-James



Researchers attending the River biomonitoring and training course at Albany Museum. Photo: Linda Dyani

Between 4th and 8th May, the Albany Museum was the venue for training freshwater researchers from across the country in the use of the biomonitoring protocol known as SASS5 (South African Scoring System, Version 5). This looks at the invertebrates living in streams and rivers, and uses their presence/absence and abundance to give an index of water quality relating to the ecological health of the river. This was run jointly by GroundTruth, a Hilton-based water research company headed by Dr Mark Graham, Ms Christa Thirion (National SASS Auditor) from the Department of Water Affairs and Sanitation (DWS), Pretoria, and staff of the museum's Department of Freshwater Invertebrates (Dr Helen James and Mr Musa Mlambo). Delegates came from the Lesotho Highlands Development Authority, South African National Biodiversity Institute (SANBI), DWS, the Water Research Commission (WRC), North West Province Department of Economic Development, Environment, Conservation and Tourism, KwaZulu- Natal Wildlife, and various environmental consultants. Indoor sessions covered theory. In addition, Ms Lyndall Pereira da Conceicao, a Rhodes University PhD student, was a guest speaker, sharing the exciting research she is doing on a special group of mayflies under the supervision of Dr James. This highlighted the importance of species level knowledge in some studies in contrast to the rapid, more course approach used in biomonitoring.

Each day during the course, different river sites were visited to show what to expect at clean verses polluted sites. Specimens were also studied under microscopes to show the delegates how to identify them and fill in the score sheets. For those who were ready to become SASS-accredited practitioners of the River Ecosystem Monitoring Programme (REMP), the course ended with an accreditation day on the Craig Doone Conservation Academy (owned by Mr Wayne Vos), just outside of Grahamstown.

Celebrating Museum and Africa Month with Albany!

By Linda Dyani and Lindinxiwa Mahlasela



The Team

Albany museum's mobile unit embarked on a road show to celebrate museums and Africa month. Jauka Hall in Port Alfred was the first stop on Tuesday, 26 May 2015. In a matter of minutes the hall was turned into a "museum" displaying artefacts from Invertebrates, history, anthropology, archaeology, fossil collections. Experienced museum officials with expertise in various fields manned the stalls and interacted with approximately 300 learners from Port Alfred primary, Kuyasa and Nomzamo Secondary schools.

Africa day

Facilitator, Lindi Mahlasela asked learners their meaning of Africa Day. He confronted them with some difficult questions that included; how many countries make up the African continent?, Who are the presidents of Mali, Malawi, Kenya, Congo, etc? He asked them about leading musicians and artists in the continent. When answers were not forthcoming he asked them who the president of the United States is. A resounding "Barack Obama" was echoed. By this time a point was driven "knowing about other countries and peoples of the African continent will eliminate prejudices that led to xenophobia and promote togetherness and social cohesion".

Participant's views

Ms Nxawe, an English teacher from Nomzamo High School who accompanied learners, thought the event was a "worthwhile exercise". She strongly believes that activities like these go a long way in motivating learners as they broaden their career choices. Additionally, Ms Nxawe promised to take her learners to Albany mMuseum to see, touch and smell collections.

Two grade 11 learners from Kuyasa were surprised to learn that museums are places where highly qualified people could pursue careers and that IT experts, finance administrators, also have a place at such institutions. Learning about insects was something that the two girls never thought was a career.

A grade 9 learner from Port Alfred Primary said he wanted to study Paleontology at Rhodes University after finishing grade 12, whilst Simphiwe Mxube, a grade 10 pupil from Kuyasa Combined School wanted to explore the field of Archaeology.

Clearly, the visit had a positive effect on learners and Albany Museum wishes them success in their endeavors.

SAMA Conference

By Linda Dyani



Delegates at the SAMA conference in Durban which was attended by Albany Museum staff

Albany Museum staff attended and presented papers at the South African Museums Association (SAMA) Conference (26th to 29th October in Durban). The Conference was hosted by SAMA KZN.

Ms Nozipho Madinda and Mr Phumlani Viwe Cimi presented papers entitled

"Mobile museum educators and outreach officers as critical links for museum contributions in communities and vice versa and "Investigation of the species diversity, density, abundance and distribution of street trees in the Grahamstown area" respectively. The theme of the conference was "Museums for a sustainable society". The event was attended by 350 delegates across the country.

The South African Museums Association says that museums can play a vital role in educating communities to create a sustainable ecological, economic and social environment.

The theme highlights the role of museums in raising public awareness about the need for a society that is less wasteful, more cooperative and that uses resources in a way that respects living systems.

The International Council of Museums (ICOM) President, Prof Dr. Hans-Martin Hinz says, "Museums, as educators and cultural mediators, are adopting an increasingly vital role in contributing to the definition and implementation of sustainable development and practices. "Museums must be able to guarantee their role in safeguarding cultural heritage, given the increasing precariousness of ecosystems, the situation of political instability, and the associated natural and man-made challenges that may arise".

"Museum work, through education, and exhibitions and research, for example, should strive to create a sustainable society.

"We must do everything we can to ensure that museums are part of the cultural driving force for the sustainable development of the world."

Cultural Plants

By Lindinxiwa Mahlasela

One of the striking exhibitions at the Albany Natural Science Museum, is the Xhosa Plants exhibition. It is a unique exhibition because it lands itself on a very important matter regarding heritage in South Africa; TRANSFORMATION. Yes Xhosa Plants exhibition speaks about transformation.

In this exhibition curator Mqwathi, otherwise known as Mr Cimi, tells us the various uses of certain plants in Xhosa societies. Simultaneously, he reminds amaXhosa and Africans at large that 'WE ARE BOTANISTS'!! Significantly, the exhibition disputes the outdated colonists' idea that Africans are people without culture and heritage and therefore shouldn't be represented in museums thereof.

Cosmetics

Isibindi, umavumbuka, and ummemezi are just some of the plants that amaXhosa used (and still use) as cosmetics. Ummemezi – literally means calling aloud or figuratively 'take a look' was largely used by young females seeking the attention of young man. It lightens ones skin quickly like the contemporary 'make ups'. However it is said that it may cause some damage to one's skin especially the risk of skin cancer. Umavumbuka nesibindi on the other hand was used to mitigate the risks that ummemezi could do and maintain the beautiful glowing skin.

Magic and Charms

Unfortunately at some stage in our lives we come across difficult challenges. They become so difficult that one tends to believe in magic powers. Among amaXhosa certain plants are a stimulus for such magic. For instance uLuzi is one such plant. The bark of uLuzi tree is usually prepared by an aunt and would be tied around ones' neck during initiations. Also, when one has serious challenges uLuzi will be used as magic to overcome such challenges. This includes cases where young women have difficulties falling pregnant, young men not finding jobs, and many other difficulties that people find themselves having to face. Similarly, INtelezi is used to make one likeable, lucky and protected. Some families even put it on rooftops so that they are protected against lightning and witchcraft.

Rituals and Rites

Often I hear people wishing each other 'good luck'. It's especially the case when one is about to engage in an important exercise like writing examinations or travelling and many other activities that people deem important and require some intervention for them to achieve. Xhosa Plants shows us that amaXhosa went beyond the mere 'good luck' in wishing one another success and blessings. To them the 'wish you good luck' practice is both practical and rooted in their belief system. For instance, when young men complete their initiation they carry umnqayi, a stick that is believed to have power to bring blessings to the young man. Intonga yoMnquma is perhaps the most commonly known stick among amaXhosa. When men travel to faraway places they carry it. When there is thunder and lightning it is put on the floor to protect the family from being struck by lightning. During family gatherings when rituals are performed men would carry iminquma nemisimbithi which serve the purpose of cleansing their bodies so that communication with the departed cannot be interrupted by bad spirits. Similarly, impepho is burnt when one interprets dreams, during meditation and of course during family ceremonies where rituals are held.

Ceremonial Crafts

Ukhukho is a traditional mat. It is used for sleeping and as a couch especially by women. Additionally ukhukho is inherent in initiation practices. A bride has to have one. It is called uMahambehlala. Literally uMahambehlala means sitting all over the place. This has negative connotations. How the term was conceived and its true meaning needs to be investigated. Marriage is an important status that brings pride and enhances families' dignity. It is therefore doubtful that one of the institutions properties would be mocked. Lastly, young men coming from initiation school sit and sleep on ekhukhweni for a considerable period of time.

Conclusions

The Xhosa Plants exhibition has to an extent articulated transformation in museums especially in regard to exhibition content and knowledge systems. For centuries ethnographic galleries seem to have been the only exhibitions one could find in museums. This was consistent with racist attitudes of the past that viewed natives as some creatures that should be studied to satisfy curiosities and be preserved before they perish. The current dispensation requires exhibitions that emancipates heritage of the marginalized in order for them to take pride in their knowledge systems rather than calling them 'superstitions'.

Staff Sport:

Albany Museum represented at the National Public Servants Sports Tournament!

By Linda Dyani



Photo: Paulus Janse

Our own Heine Kohl was selected to play Table Tennis at the National Public Servants Sports & Cultural Events Tournament (NPSSCE) in Mpumalanga on 9-11 October. Heine participated at the Eastern Province Trials held in Alice earlier last months, and amongst 30 players, only 4 were selected.

He used to participate in tournaments back in his school days, representing the South African District Sports Union (SADSU) under the banner of the South African School Sports Association (SASSA), playing rugby, and cricket. Heine was also an athlete. He says "I am very excited to be participating in this tournament and I promise to make Albany Museum and Grahamstown proud."

The National Public Servants Sports and Cultural Events (NPSSCE) is an organization that coordinates and facilitates engagements of Civil Servants in Sport activities. The Eastern Cape was afforded an opportunity to host the National Tournament in 2014. This year it will be hosted at Mpumalanga and all provinces will participate in the following sporting codes: Football, Volleyball, Netball, Tug-of-War, Table and Lawn Tennis, Table Pool, Chess, Mraba-raba, Jukskei.

Heine returned with a gold medal from the tournament. Well done Mr Kohl!

Farewell:



Dr Billy de Klerk

The Museum bid farewell to one of the longest serving members, our Paleaontologist Dr Billy de Klerk retired at the end of March this year. Dr De Klerk has been with the museum for 30 years and is continuing in the post of Curator Emeritus.

Bereavements:

Sadly the Museum lost 2 staff members in less than two weeks in October due to ill health. Monde Lamani joined the Observatory Museum in the 1980s and he was operating the camera obscura. Siphon Quntu has been with the museum for 23 years as a general worker.

May their souls rest in peace.



Siphon Quntu



Monde Lamani

Join Friends of the Museum



Friends of the Albany Museum

What is the Albany Museum?

Established in 1855, it is the second oldest museum in South Africa. The core block was built in 1899 and added to over the years. The History Museum was built in 1965, and the Observatory was restored by De Beers Consolidated Mines in 1983.

The Albany Museum Complex consists of the Museum and Heritage sites:

- Natural Sciences Museum
- History Museum
- Observatory Museum
- Fort Selwyn on Ganfire Hill
- Old Provost Prison
- Priest's House

What does the museum do?

The core purpose of the museum is to make people aware of the world around them, through its collections, research, education, exhibitions and publication programmes.

The collections are the foundation on which all these activities are built. They include:

- The largest collection of freshwater invertebrates in Africa
- The largest collection of stinging wasps and bees in the country
- The fourth largest herbarium in the country
- The earliest Stone Age collections
- Palaeontology collections dating back to the Devonian
- Historical collections, including artworks

These collections underpin unique research across many disciplines, and are used widely by our own staff as well as by university students and researchers from all over the world.

Why join?

Do you want to engage with your local museums? Would you like to be part of the exciting vision for new exhibitions, or volunteer to help keep doors open to the public over weekends? Help us to make the Albany Museum and its satellites a world class institution by becoming a "friend of the museum".

You can support the different Museums of the Albany Museum Complex in many ways, practically and financially. Participate in the Volunteer Programme and help with a variety of interesting tasks, such as by assisting in a specific department or taking groups to see specific displays.

Others donate to the Members Fund which is used for specific Museum programmes.

How do I join the "Friends of the Albany Museum"?

What benefits do members have?

- Free admission to all museums
- Five complimentary tickets a year for your friends
- An electronic copy of the museum's newsletter
- Invitations to special functions and exhibition openings

You can also become a volunteer:

Members of the Museum's Volunteer Programme can work in many of the museum's sections on a voluntary basis. Here they do valuable work as varied as cataloguing books and journals in the library; inputting collections records onto computer; mending costumes and cleaning furniture; teaching school children or guiding visitors through exhibits.

All volunteers are screened to ensure they will be happy in a particular place in the museum, and are given training and instructions where necessary. If you are interested in becoming a volunteer, please indicate on the application form in what field(s) you are interested in and we will contact you.



As a member you:

- Contribute to the growth of the second oldest museum of South Africa.
- Help people understand each other's cultures and histories, and the world around us.
- Help the museum provide ever better education programmes for all the Eastern Cape's young people.
- Form part of a growing community of people who, through their generosity, are actively preserving our natural and cultural treasures for future generations.



MEMBERSHIP APPLICATION

I wish to become a member of the Albany Museum as indicated below:

Individual	R30
Senior Citizen	R25
Student	R25 (valid student card)
Family	R50
Patron	R250 or more

Please indicate by ticking the relevant box:

Age	Gender
21-35	F
36-60	M
61 and above	

Name.....
 Current Occupation
 Address.....
 Cell.....
 Email.....
 Post Code.....
 Telephone.....
 Children's Name/s (if family membership).....
 Age.....
 Age.....
 Age.....
 Date.....

Total amount of R..... enclosed payable to the Albany Museum.

Bank : Standard Bank
 Account No : 081 999 321
 Branch Code : 050917
 Type : Current account

Send the completed form, with proof of payment to:

The Membership Coordinator
 Albany Museum
 Somerset Street
 Grahamstown
 6139
 Telephone: +27 46 622 2312
 Fax: +27 46 622 2398
 E-mail: info@am.org.za
 Web: http://www.ru.ac.za/albanymuseum/

Yes, I would like to be a volunteer.

My preference is:

- History
- Genealogy
- Archaeology
- Anthropology
- Insects
- Fossils
- Birds
- Plants
- General Conservation
- Exhibitions & Displays
- Media & Public Relations
- Education & Outreach
- Information Technology
- Leading guided tours

FOR OFFICE USE ONLY:

Membership Co-ordinator:
Date.....
Amount.....
Memb. No.....



From the Albany Museum Team

We wish you a happy holiday and a festive season.

Our sincere thanks for your support throughout the year.

Umthombo is a Xhosa word for a fountain.

Umthombo will be published three times a year and free to all Friends of the Museum. This issue was created, laid out by Rev Linda Dyani and edited by Dr Helen Barber-James and Mr Manzi Vabaza. For more information please contact Linda Dyani on tel (046) 622 2312 or email l.dyani@am.org.za.



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Twitter: [@MuseumAlbany](https://twitter.com/MuseumAlbany)

Museum Operating Hours

The museum opens at 09:00 and closes at 16:30 during weekdays only. We are not opened on weekends, unless on special arrangements for groups.

160th
ANNIVERSARY





Affiliated Research Institute of Rhodes University