

# Lorien Novalis Alumni News



WHERE ARE THEY NOW?

Catching up with Lorien's ex-students

October 17th, 2007

## A Journey from Lorien to Antarctica

Ex-student **Katherina Petrou's** journeys began with the walk down the hill to Kindergarten and continuing her way through to Year 12 at Lorien. Now she is aboard the Aurora on her PhD voyage to the incredible icy land of Antarctica.



At only 29-years-old it's hard to believe Katherina Petrou (aka "Teeny") has already accomplished what most of us could only imagine. She is currently aboard the Aurora Australis on the frozen seas of Antarctica. It is her second voyage to the great icy land as part of her PhD studies at the University of Technology in Sydney.

She is one of 45 scientists from 8 different countries on this six week expedition and will work on the Sea Ice Physics and Ecosystem eXperiment (SIPEX), one of Australia's major contributions to the International Polar Year (IPY).

Specifically, Katherina will examine the photokinetic processes and responses of Antarctic microalgae to changes in environmental stresses with respect to global warming.

"As you may well know, the entire Antarctic food chain relies on the survival and productivity of the microalgae," says Katherina. "As a result of global warming the ice in both the North and South poles is beginning to thin or in some cases disappear. This can have huge consequences for primary

productivity in these regions and would affect the entire food web from krill to the seals and whales," she explained.

As Katherina embarks on an extraordinary voyage we talk with her about the journey she has taken since her days as a student at Lorien Novalis and reflect back on her memories of school.

"I hold fond memories of my time at Lorien," says Katherina, who spent her entire schooling at Lorien Novalis from kindergarten in 1983 through to Year 12. "I still remember the smell of the arrival of spring in the perfumed orchard on the way down the hill," she reminisced. "I especially loved Winter Festivals, class trips and putting on class plays."

"I still have all my main lesson books and can remember my favourite ones, the Romantic Poets, The Religions of the World, 20th Century Poetry, the History of Mathematics and Chaucer," she said.

Katherina's year 12 major work was black and white photography - creating images of elemental beings, a self portrait and a series of dance images. "This was representative of me in the centre of my two loves, my love of nature and my love of movement," says Katherina.

As an accomplished dancer, Katherina first joined the Royal Academy of Dance to become a certified ballet teacher after graduating from Lo-

rien. She has taught classical and contemporary dance for the last 11-years. While she loved dance, Katherina felt the pull toward her greater love of nature.



“It used to intrigue me that there were so many unknowns and every little new fact about every creature or plant fascinated and captivated me,” said Katherina. “I began to feel great sadness and be

appalled by the damage we were inflicting on this truly remarkable planet. So, I decided to apply to the University of Technology, Sydney to do a double degree -- a Bachelor of Science in Environmental Biology and a Bachelor of Arts in International Studies,” said Katherina.

Katherina excelled in the courses required for both her degrees, particularly biology, chemistry and statistics, as well as the Spanish language. She thrived under the balance she found in the diversity of her two degrees. “I loved the combined degrees. It gave me a real balance for both the arts and science... and I got to explore another continent and culture,” she said.

Katherina spent her fourth year overseas in Concepcion, Chile to attend La Universidad de Concepcion and put her Spanish language skills to the test. She loved Chile so much that she extended her stay for an additional year. After all, it was this country where she met her husband, Javier. Katherina immersed herself in the culture and travelled throughout Central and South America from Cuba to Mexico, Guatemala, Peru, Bolivia, Chile, Argentina and Venezuela.

Katherina returned to Australia to complete her final year of university, which included trips to Heron Island (Great Barrier Reef). Her enthusiasm for her studies resulted in being awarded two certificates for academic excellence. She was then asked to do her Honours, a year of research that allows one to enter into a PhD program if high achievement is reached.

Her research was in the field of photosynthesis (the process in which plants are able to convert carbon dioxide and sunlight into carbohydrate and

oxygen). She examined microalgae, which are “microscopic single-celled plants that live in our oceans and are responsible for over 40% of the earth’s oxygen,” she said.

### **Awarded PhD Government Scholarship**

Katherina completed her research and thesis and had her first publication accepted by a scientific journal. She was awarded First Class Honours, a Dean’s Merit List Award and received an Australian Postdoctoral Award (a Government PhD scholarship) to support her during her three-year PhD.

“I am still in awe that I am being sponsored to come to the Antarctic, one of the most unexplored and isolated places on the planet, to conduct my research,” says Katherina.

“It is incredible to see the sea ice in its many different forms, to see great icebergs line the horizon, to spend an entire day seeing nothing but white, and to experience cold, real cold when you go out to sample the sea ice in -20 degree temperatures with wind chills of -47,” describes Katherina.



“I am especially in love with the wildlife,” she says. “The Albatross soaring on the wind currents, or the pure white Petrels circling the ship, the slow lumbering of the Weddell Seal as he makes his way across the ice. And of course the comic yet royal behaviour of the Emperor Penguins, who are sometimes alone in the vast white deserts and other times huddle close to their fellow feathered friends,” says Katherina.

Follow Katherina Petrou’s exploration of Antarctica by visiting <http://www.acecra.sipex.aq> . Click on her Blog link beneath her profile.