On the 18th of January, I set out to Canberra for a 12 day experience of a lifetime called the National Youth Science Forum.

I boarded my plane from Coffs to Sydney expecting a high level science camp where I could learn about all the job opportunities that awaited me after graduation, but I got so much more. It became apparent to me that NYSF was not what I was expecting, when on our way into Canberra, our student staff members, lovingly called “staffies” started to chant and dance around on the bus and a whirlwind 12 days of fun, friendship and science began.

We stayed on campus at Australian National University in Burgmann College, which allowed me to experience uni life in all its glory- cafeteria meals, single rooms and communal showers. Also as the University’s science facilities are outstanding, we did a lot of lab visits to various areas of the university.

The people at NYSF are the reason it had such a long-lasting impact. Everyone was about the same age as me, all shared a passion for science, were extremely intelligent- some way beyond my scope of understanding, and everyone was friendly and open. But it was the ‘staffies’ that absolutely made the atmosphere at NYSF. ‘Staffies’ are NYSF alumni, from sessions 1-2 years ago, and they train for a fair portion of the year, and come down to completely run the session. Everything from taking us to lab visits, running various lectures, supplying poppers- staffies had it covered. And even though they were running on much less sleep than us, they were upbeat and energetic all the time.

On top of a wide variety of students from all states of Australia- even a boy from Norfolk Island, there were a number of international students that attended the NYSF. I had the chance to become good friends with a boy called Jia from South Africa who was in my interest group, a girl from Zimbabwe who was in my floor group, and two girls from Fiji. As I have a personal interest in international culture, I took this opportunity to expand and learn a lot more about the culture and lifestyle of these countries and I feel that the friendships forged with these students will last well into the future.

The schedule was absolutely jam-packed. With a morning, afternoon and evening activity which each could’ve taken a whole day, it would be impossible for me to tell you everything I did. But I’ll do my best to give you the highlights of my NYSF experience.

We had a total of 8 lab visits. Because I was in a physics interest group, they were mainly tailored to this, but also featured some non-physics lab visits to open us up to other possibilities. Our lab visits included the NASA Deep Space Communications Centre- which was an absolutely amazing experience, and various visits to different physics labs at the University. We also visited the Australian Defence Force Academy for a chemistry workshop, where we manufactured a chemical and used it to create blueprints. We visited the National Computational Infrastructure for a computer science visit, and viewed Australia’s supercomputer. I don’t really have a huge knowledge of computer science, but I found it astounding that a single computer requires the space of a whole floor of a building. We even visited the National Film and Sound Archives to learn how old film is preserved and stored. And this is just the summarised version. I learnt so much about science and how people are applying it in the world from these lab visits. They enabled me to strike out things I did not want to do, like modelling physics on a computer, and opened me up to things I might like to do, like electrical engineering.

On top of doing lab visits, we quite a number of lectures. These were on various topics ranging from ‘What Happens after the HSC’ to ‘Diversity in STEM’. A couple of the standout lectures for me, included the talk on Medicinal Cannabis by Professor David Caldicott, which altered my views and encouraged me to rather than do science for the sake of science, to do it to help and make a difference in the world. Another was Rish Ratnam, a speaker on an entrepreneurial workshop panel who gave a lecture. Professor Tanya Munro also gave a talk about photonics- the science of light- and how she is applying photonics in rather unconventional situations to measure something in minute detail. I enjoyed this because the topic was extremely interesting, and because the number of women who make it to a professorship, especially in physics, is extremely low. Hearing about her life and how she managed to achieve in such a competitive field gave me the determination that I can do it too. And probably the standout lecture was the CERN skype conference we did with one of the leading scientists working at the Large Hadron Collider. This facility is the forefront of global science right now, and it’s made some amazing discoveries in the past years. So it was kind of like meeting a rock star or a famous celebrity. He answered our questions, and I kind of sat there in awe that he was actually sitting in the Large Hadron Collider. This particular talk will stay with me for a very long time.

We also had quite a number of speakers that were NYSF alumni, and had gone out and made their mark in Science, and other fields. One of these alumni was Dr. Subho Banerjee, who gave a talk at the Rotary dinner. Hearing his speech and about how he had gone on to become a Rhodes Scholar was truly inspiring and his particular messages on boldness and kindness made a great impact on my way of thinking, and the way I view the scientific community.

We also had a similarly influential speech in the last week of session at our science dinner. The science dinner was a formal occasion, where we travelled by bus to the Australian Institute of Sport and mixed and mingled with various scientists and industry professionals over a lovely dinner. After I plucked up the courage to actually start up a conversation, I had quite a lengthy talk with a phycologist working at the Australian Academy of Science, and a quantum physics PhD student at ANU. We discussed what it was like doing a PhD, a program called SAGE that is underway at the Australian Academy of Science, what it was like in various fields, and how science is changing and evolving. In talking to these people I felt like I was no longer being treated as a student, but a fellow scientist, and it was a great opportunity to find out what scientists and industry professionals were doing and the paths they took to get there. I am sure that this acquired knowledge will greatly benefit me in the future.

On this night, we had an inspiring speech by an oncologist, Dr. Srivastava, and although I won’t enter Medicine, what impacted me the most was the need for humanity in science. To think what ramifications and implications any discoveries may have and to relate this back to human beings.

On top of all of this wonderful science, we participated in a number of social events. Some highlights were the swing dance, in which we learnt the Charleston, the science disco- where some of my friends and I dressed up as Noble Gases, visits to the National Museum and the National Library and of course Questacon.

I think all these events really allowed us to become close friends in a very short period of time. I spent from 8am to 10pm every day with my interest group of 14 people, and as a result we now skype chat every Sunday night, even with Jia in South Africa, and plan to meet up and stay together for the next step programs.

I have taken so much away from NYSF, and just as Damien Pearce told us at the start, NYSF did significantly change me, and it also changed what I want to do. Whilst before NYSF I was interested solely in Physics as a career, I now want to perhaps apply my physics in biomedical or electrical engineering, or in biophysics, or do something completely different and study immunology and virology. Another field that I’m also looking into is international scientific communications. I have a passion for both science and culture and languages, so I feel like this may be a path I can take to combine both of these. Thanks to the lecture by the staffies on what happens after the HSC I’m looking at taking 6 months off to travel before I enter university, and I’m hoping to go to Next Step programs in Melbourne, Sydney and Brisbane.

Of course, I could never have come to any of these conclusions without the help and support of a large number of people. Rotary has supported me significantly by being such a fundamental partner to the NYSF, and I would like to particularly extend my gratitude to the Sawtell Rotary, for their financial assistance and for mentoring me through the selection process and preparation for NYSF, to the Rotary club in Walcha for hosting and providing catering for our orientation and district selections, and to the Canberra Rotary clubs, for their role in assisting with the NYSF, particularly through the sourcing of hosts, such my host Gordana who kindly welcomed me into her home, and of course to the Rotary mum and dad and aunts and uncles that helped us whilst on session. I would also like the thank the Business and Professional Women’s Association in Coffs Harbour, Slater and Gordon Coffs Harbour and St. John Paul College, who through their financial support helped me attend the NYSF. Also thankyou to all the companies and organisations who support NYSF, your participation in the program meant that as students we had the chance to learn about internships etc. at your companies, which has really given us a head start for the future.

Finally, I would like give my thanks to all who helped organise and run the NYSF. This includes Professor Tanya Munro, Damien Pearce, Sandra Meek, Amanda Caldwell, Madeline Cooper, all the staffies- especially my floor staffie, Blake, and everyone else involved in the process of organising and running the NYSF. Without you, the NYSF would not be a reality, and I am so truly grateful for the work you continue to do to ensure that the NYSF is a life changing experience for me, and everyone else who has attended and will attend in the future.

The NYSF had made a significant impact on my aspirations, and myself personally. After spending 12 amazing days in Canberra, I can safely say the NYSF has been a wholly worthwhile experience and I hope through spreading the message and ethos of the NYSF that I can assist students like me to apply for and undertake the life changing experience that is the National Youth Science Forum.

Laura Wratten

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