ST JOHN'S COLLEGE UNIVERSITY OF CAMBRIDGE Michaelmas Term 2017

The Keeper of the Bees: The ins and outs of being a beekeeper at St John's

Our Species and Other Hominins: the Mother of all Genetic Puzzles

Up for Sail: Dr Sue Colwell and the Tall Ships Youth Trust

**10 Minute Interview with Jane Jones** 

# Welcome to our recent new staff!



Image credits: All photos 1 Sandra Aleksiejute – Library Cleaner 2 Susannah Rose - Head of Alumni Relations 3 Toby Herbert – Apprentice Painter & Decorator 4 Paul Williams – Porter 5 Emma Dellar – College Nurse 6 Elenitsa Brotherson – Bedmaker
7 Kinga Gutowska – Bedmaker 8 Alice Read – Library Graduate Trainee 9 Eleanor Cullum – HR Manager 10 Fiona Hill – Academic Administrator (maternity cover) 11 Michael Slade – Section Chef 12 Dimka Slavova – Deputy Linen Room Supervisor
13 Helen Vahtrik – Property Administrator – Hostels 14 Lukasz Perlik – Database Developer 15 Catherine Ascough – Library Assistant 16 Sophie Kirk – Choir Music Administrator 17 Catherine Shanahan – Library Cleaner 18 Charlotte Smith – Library Projects Assistant (job-share) 19 Ricky Clark – General Kitchen Assistant

# And goodbye and thank you to....

... Gerry Jakeman, Properties Administrator, who retires on 20 October 2017.

If you have any story ideas for future editions of Eagle Eye, or any thoughts about the current edition, please contact the editor, Louise Hanzlik, on Ih445@cam.ac.uk – we'd love to hear from you.

Welcome to Eagle Eye, the newsletter for staff, Fellows and students of St John's College

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### Eagle Eye

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Cover Image: Bees at the St John's hives. Credit: St John's College

# News Round-up

### What's been happening around St John's



# St John's appoints new Director of Education and Senior Tutor

Dr Annis May Timpson has taken up her new post of Director of Education and Senior Tutor at St John's. She is responsible for overseeing both the education and the welfare of the College's students. Dr Timpson joins the College with an established track record as an experienced academic leader, having led undergraduate teaching and developed graduate programmes at the Universities of Nottingham, Sussex and Edinburgh. Dr Timpson directed the Centre of Canadian Studies at Edinburgh and led School Careers education at Sussex. She succeeds Dr Matthias Dörrzapf, who has been Senior Tutor since 2003.

# Silk 'micrococoons' could be used in biotechnology and medicine

Microscopic versions of the cocoons spun by silkworms were manufactured by a team of researchers, led by College Fellow Tuomas Knowles. These silk 'micrococoons' could be used to store sensitive proteins and other molecules for a wide range of uses. They could also expand the range and shelflife of proteins and molecules available for pharmaceutical use, enabling the development of new treatments against cancer, or neurodegenerative conditions such as Alzheimer's and Parkinson's Diseases.





St John's Dean of Chapel to lead Anglican mission agency

The Reverend Duncan Dormor, Dean of Chapel at St John's, is to become Chief Executive Officer of United Society Partners in the Gospel (USPG) - a global Christian charity that works in close partnership with local communities and churches. Duncan has worked and taught at St John's for almost 20 years, and he will be leaving at the end of 2017. USPG is an Analican mission agency which enables local churches in more than 30 countries to transform people's lives, tackling issues with poverty, improving healthcare, and giving children access to education. As Chief Executive Officer, Duncan will be responsible for leading the organisation and overseeing its development and strategic direction.

## Big, shape-shifting animals from the dawn of time

In a study co-authored by St John's Fellow Simon Conway Morris, researchers showed how major changes in the chemical composition of the world's oceans enabled the first large organisms known as rangeomorphs - possibly some of the earliest animals - to exist and thrive more than half a billion years ago. The researchers determined how rangeomorphs were able to grow up to two metres in height, by changing their body size and shape as they extracted nutrients from their surrounding environment. The results, reported in the journal Nature Ecology and Evolution, could also help explain how life on Earth, which once consisted only of microscopic organisms, changed so that huge organisms like dinosaurs and blue whales could ultimately evolve.





Gardening team are the victors at annual staff football tournament

The Gardeners and Groundsmen emerged triumphant in the annual staff football tournament held in August. The Gardeners competed against Housekeeping and the Odds & Sods, comprising a mixture of Maintenance, Catering and Tutorial staff. Despite howling wind and rain, and aching limbs, the Gardeners managed to pull it off to beat Housekeeping in the final match, scoring 1-0. The 'Tom Daley Award for Diving' was given to Adam Magee, Head Gardener, and the 'Specsavers Award for Refereeing' went to Henry Ellis, Assistant Groundsman.



### Researchers formulate recipe for Black Phosphorus ink

Guohua Hu, a fourth-year PhD student at St John's, is the lead author of new study which successfully developed a formula for turning a new graphenelike material called black phosphorus (BP) into ink. The study, reported in *Nature Communications*, has produced a unique ink that can be used for the high-speed, low-cost printing of BP-based laser and optoelectronic devices. The printing also allows for the BP ink to be precisely and uniformly printed onto a variety of surfaces such as silicon wafer, glass, plastic and paper. The ability to print on soft substrates offers the potential for the manufacture of flexible devices such as wearable electronics.

► Image credits: Dr Annis May Timpson: St John's College; Silk from the Chinese silkworm Bombyx mori: 2017 Oxford Silk Group; The Reverend Duncan Dormor: St John's College; Rangeomorphs - Jennifer Hoyal Cuthill (University of Cambridge); Gardeners and Groundsmen: St John's College; Black phosphorus crystal: Smart-elements.com.

# The Keeper of the Bees

We meet the President of the St John's Beekeepers Society, Gavin Cheung, to discover the ins and outs of being a beekeeper.



avin is preparing the smoker. He crouches down and fills it to the top with pieces of wood, moss and bark, sets it alight, closes the lid, then gives it a puff with the bellows. Large clouds of grey smoke waft out from the device and around the garden. We are ready. It is time to visit the bees.

We are in the gardens of 1 Madingley Road with Gavin Cheung, co-founder and President of the St John's Beekeepers Society. Gavin, a PhD student in Physics, co-founded the society last January with Antoni Woss, also a Physics PhD student - and at that point, neither of them knew a thing about keeping bees."I've always been interested in bees," says Gavin. "Antoni's friend, who also studied here, kept bees, so that was our first experience with them. But the whole thing really started when I watched the movie Rushmore, which is about a student who starts lots of clubs and societies, including a beekeeping society. I found that idea very entertaining!"

Gavin and Antoni thought that St John's could provide them with the perfect opportunity to start a beekeeping society due to the funding and land that the College could provide, so they signed up for an eight-week course with the Cambridgeshire Beekeepers' Association for two hours a week and learnt everything they needed to know in order to get started. "We were the youngest on the course," says Gavin."It was mostly elderly, retired people! It was very interesting; we learned a lot." The St John's Beekeepers Society was then established, and it currently

"We like to encourage an interest in bees and educate people about their positive impact on the environment." has eight committee members including a treasurer, secretary and publicity officer. Out of approximately 40 student societies at St John's, it is only one that deals with living creatures.

Gavin is dressed from head to toe in a white beekeeper's suit, including a hood with a veil, gloves, and heavy boots. Armed with his smoker, he is ready to check the hives for problems; they are checked every week or two by a member of the society. Gavin heads over to the two hives located in the corner of the garden behind a fence, attached to which there is a warning poster informing anyone who might be passing through the adjacent gate to the playing fields that there are bees in the vicinity.

He approaches the first, larger hive, which has 10 frames housed in a super, or box. Both hives have moveable frames, which makes it easy to check on the bees."We mainly check to see if there is a queen laying eggs, and we look at the bees' wings to make sure they are not deformed. The larva should be milky white, but if they are red and oozing it's not a good sign." He explains that if there are any problems it may mean that parasitic mites such as varroa could be feeding on the lava. These parasites feed off the bodily fluids of honey bees, and can carry viruses which lead to deformed wings and cause the collapse of a colony.

He puffs the bellows at the entrance of the hive, and lifts the top frame from the super, giving another couple of puffs of smoke as he does so. As well as creating a screen for the bees, the smoke disorientates and pacifies them, and it disguises the alarm pheromone that they emit when they are disturbed so that they don't swarm and attack, which in turn prevents multiple stings. The





### "We were the youngest on the course - it was mostly elderly, retired people!"

bees are also more cooperative when they are smoked; they move out of the way more easily when being inspected. "We have about 8,000 bees in this hive," says Gavin, "and about 2,000 in the smaller one. We only started with 1-2,000 bees in total last July. We didn't expect these high numbers so soon. The numbers will fall, though, as we approach winter as the bees will start to die out."

Gavin examines the frame to see how the bees are looking. They appear to be relatively calm. "It's a nice frame; the bees are looking good. I can't see any deformities or any sign of serious problems, and they are quite well-behaved."

He has brought along some plastic bee escapes to fit to the hive. Bee escapes allow the beekeeper to separate the bees from the super, and to move them away from the honey – which is due to be harvested in a few days. The bees can't enter through the escape; it's one-way traffic only. "I've never put bee escapes in before," says Gavin, fitting them to the hive. How does he know how to do it? "I read up on it!"

He checks the lower frame, called the 'brood chamber', where the queen lays her eggs. There are plenty of bees on the frame, and Gavin can see lots of eggs underneath the bees waiting to hatch. He lifts out another frame which is much heavier than the others – it is filled with honeycomb. He explains that they will be harvesting the honey on Sunday, and this will be their first harvest. Bees start to store honey in the honeycomb from late March/April, and they continue to do so until winter. The honey is harvested between June and September. "We are borrowing an extractor from the Cambridgeshire Beekeepers' Association to spin the honey out, and have ordered the honey jars."

The bees don't like us looking at their honey; they are becoming quite protective and start to get agitated and swarm. Gavin puffs more smoke towards them to calm them down. "I'd better not keep this open for too long; the less time, the better – we've alarmed the bees enough." At this point, a bee stings him through his glove, which he hastily brushes off. Bee suits are obviously not as sting proof as we may previously have thought.

"At the beginning we were very nervous of the bees, especially after one got into Antoni's suit and stung him several times, including a sting on the eye which he had to go to hospital for. We considered giving it up at that point. But we gradually built our confidence and learnt how "We have about 8,000 bees in one hive, and about 2,000 in the smaller one. We only started with 1-2,000 bees last July - we didn't expect these high numbers so soon."

to do things better, and discovered how to have patience with the bees. The time of day you visit is quite important; the bees don't like it when it rains – they tend to get more annoyed with you then."

St John's College Beekeepers Society is always looking for new members to help look after the bees. Members of the society conduct hive visits over the honey-gathering season, and the society also puts on events such as tastings and film nights – they recently showed *Bee Movie* and the documentary *More Than Honey.* "We like to encourage an interest in bees and educate people about their positive impact on the environment," Gavin tells us. "Wild bees are in decline due to the use of pesticides and changes to their habitat, so the more we can do to educate people about bees, and explain how beekeeping has a positive environmental impact, the better."

To read more about the St John's College Beekeepers Society, visit their Facebook page, where you can also see a photo of the honey that the society successfully harvested in August. https://www.facebook. com/stjohnsbees

► Image credits: St John's College: Honeycomb; Bees on the hive; Gavin and the smoker; Gavin checking the hive.



# Our species and other hominins: the mother of all genetic puzzles

Laura Van Holstein's third-year undergraduate dissertation led to her involvement in a ground-breaking study recently published in *Nature Communications.* The research suggests that interbreeding between Neanderthals and humans occurred much earlier than previously thought and pushes back the boundary for when members of the modern human lineage first left Africa to around 270,000 years ago.

s an undergraduate at St John's, Laura Van Holstein's dissertation centred on a finger bone and a tooth discovered in a Siberian cave called Denisova. The remains are estimated to be around 41,000 years old. Analysis of nuclear DNA (DNA from the nucleus of cells) retrieved from the bones revealed that they belonged to a previously unknown ancient hominin species closely related to Neanderthals. This 'sister species' of Neanderthals were named the Denisovans.

Scientists believe that Denisovans, humans and Neanderthals shared a common ancestor known as Homo heidelbergensis around 500,000 years ago, but then started to diverge into two distinct genetic branches. One genetic line led to the evolution of modern humans in Africa and the other led to the evolution of Neanderthals and Denisovans across Eurasia.

However, analysis of another type of genetic material found in the Denisovan remains led to a baffling genetic puzzle. DNA found in mitochondria, the part



of a cell which generates energy, is separate from nuclear DNA and inherited only from mother to child. As nuclear DNA from the Denisovan remains had suggested that Neanderthal and Denisovans were closely related, scientists were expecting to see the same pattern in mitochondrial DNA (mtDNA). They thought that the Denisovan and Neanderthal genomes would show greater similarities to each other than to the genome of modern humans. The researchers were shocked, however, to discover that when it came to mtDNA the Denisovan genome had a far greater number of distinct genes from humans compared to the Neanderthal genome.

The mystery was deepened by 430,000 year-old remains unearthed in a Spanish cave called Sima de los Huesos. Analysis of nuclear DNA extracted from these much earlier fossils showed that the bones belonged to early Neanderthals, but in this case their mtDNA did match that of the Denisovans.

"In my final year project, I wanted to offer an explanation for what had happened over the course of time to cause this divergence in Neanderthal and Denisovan mtDNA," explains Laura."After analysing the Denisovan DNA and reproducing the genetic results, I proposed that the Denisovans must have interbred with another species of unknown hominin that put different DNA into their genome – a process known as 'introgression'."

However, just as Laura was writing up her dissertation, scientists were using cutting-edge technology to extract mtDNA from a 125,000year old Neanderthal thigh bone found in a cave in Germany in the 1930s. The secrets yielded by this femur would lead researchers to an alternative solution to the genetic mystery.

"The Nature Communications paper totally contradicts the conclusions of my dissertation," laughs Laura, "but ironically the calculations that I did to support my theory led to me becoming a co-author on the study".



The paper, led by scientists at the Max Plank Institute and the University of Tubingen, suggests that rather than a mysterious hominin mating with the Denisovans it was in fact early modern humans and Neanderthals who were involved in close encounters – of the mtDNA changing kind.

Scientists already agree that a certain degree of interbreeding between Neanderthals and humans occurred after the main "out of Africa" when modern humans left the African continent and spread across Eurasia around 70,000 years ago – a theory evidenced by the presence of Neanderthal DNA in non-African humans today.

However, the ancient mtDNA extracted from the 125,000 year-old Neanderthal femur bore a striking resemblance to that of modern humans, implying a flow of genes in the opposite direction, thousands of years earlier. "We think that early interbreeding between the species led to early modern human mtDNA replacing the Neaderthal's mtDNA," Laura explains. "For the paper, my dissertation supervisor Luca Pagani and I supplied the data and calculations to show that this process of replacement is actually possible. We used computer modelling to demonstrate that mtDNA can be replaced as a result of an episode or episodes of interbreeding and gave a time scale over which this could occur."

The research puts the date for initial interbreeding between members of the modern human lineage and Neanderthals back to 270,000 years ago and, as Neanderthals were only established in Eurasia, suggests that a wave of early Homo sapiens left Africa much earlier than previously thought. The ancient African migrants disappeared, but their DNA lived on in later generations of Neanderthals – their impact too small to affect the Neanderthal's



nuclear DNA, but large enough to replace existing Neanderthal mitochondrial lineage.

"We need more research and high quality genome data to fully investigate this theory of human history," Laura warns, "but it is an incredibly intriguing area of research for future study. The recent discovery of fossils of archaic Homo sapiens in Morocco that date back to nearly 300,000 years ago supports the theory that rather than being restricted to East Africa, early modern humans were on the move much earlier than previously thought".

Laura has just spent a year abroad, working on excavations in the area of Kenya surrounding Lake Turkana with the "In Africa Project" – a team of researchers funded by the European Research Council who aim to use fossils and archaeological discoveries to fill gaps in our understanding of early modern humans and enhance international awareness of the role of Africa in the evolution of human diversity. She has returned to St John's this autumn to carry out a PhD.

"Although I really enjoy studying genetics, for my PhD I wanted to focus on the theoretical side of biological anthropology. I am going to be looking at the question of if and how different hominin species influence each other's evolution. Researchers have previously looked at 'coevolution' within a species – for example, they have examined questions of whether increased hand dexterity and improvements in tools evolved co-dependently– but nothing has been done to look into coevolution between species.

"The human family tree is huge and there are so many species living in similar environments and often together – it would be stranger to think that they didn't influence each other's evolution at all, than to expect that they did."



► Image credits: Laura excavating near Lake Turkana Kenya during her year abroad with the In Africa Project. credit- the In Africa Project; The Lake Turkana region of Kenya where Laura worked with the In Africa Project during her year abroad. Credit - The In Africa Project; The timeline of events proposed by the study reported in Nature Communications: Credit - St John's College; Diagram showing the introgression of modern human mitochondrial DNA into the Neanderthal genome: Credit - St John's College; College; Laura Van Holstein - Credit St John's College.

# Up for Sail

For more than 15 years, Sue Colwell, the College's Tutor for Graduate Affairs, has been taking teenagers to sea with the Tall Ships Youth Trust. She told us about how she got involved with sailing, the charity, and why despite the challenging nature of being a volunteer she keeps on going back for more.

r Sue Colwell arrives to talk about her work with the Tall **Ships Youth Trust** armed with a clipping from The Times which makes it easy to understand its appeal. The photograph shows the charity's own 200 foot brig, the Stavros S Niarchos, passing under a raised Tower Bridge at the end of a 10-day voyage from Portsmouth. It's a magnificent sight, and at first glance could almost be a Napoleonic sloop-ofwar returning from service in the Mediterranean or the Channel. Sue, an experienced and qualified sailor, could have a boat of her own, but as she points out: "I couldn't have one like that; it would cost six million quid!"

On dry land, Sue keeps herself more than occupied by combining multiple roles for St John's. As well as a Tutor, she is the Tutor for Graduate Affairs and College Lecturer in Mathematics for Natural Sciences. With the University as a whole, she is also a member of the Department of Applied Mathematics and Theoretical Physics.

But this is more than a story about an academic who happens to enjoy sailing in her spare time. When the Stavros S Niarchos was photographed sailing up the



Thames on September 18, it was being sailed by a crew comprising, for the most part, 14- to 15-yearolds. A week earlier, few, if any, would have known the first thing about sailing; nor would they have dreamed of being able to handle such a ship. Some of them may have been struggling with personal or emotional problems, as it is young people like them whom the charity aims to support.

The Trust was originally founded as the Sail Training Association in 1956. Judging by its glossy brochures, which advertise opportunities to sail to the Caribbean, Canaries and the Azores, one might be forgiven for assuming that it was an adventure holiday company for those drawn to the romance of the sea.

In fact, most of the profits from these paid-for voyages are invested in helping to take about 1,400 young people to sea every year. The vast majority - about 1,100 - are either disabled or from so-called disadvantaged backgrounds. Some are struggling at school, or in danger of being excluded



"When you're on a ship, it's a closed community and you have to cope with whatever happens."



altogether; others have had run-ins with the police, or been recommended by youth workers and local education authorities.

The idea is that sailing is tough, but also empowering, and that the experience of going to sea for a week or more, learning to sail, helping to maintain the vessel and keeping it clean, has huge potential benefits. Youth workers and teachers have told the Trust about the greater sense of responsibility participants demonstrate when they get back, that they listen to others more, and that they seem to be enjoying life more as well. Ofsted has praised the Trust for enabling "pupils to develop their physical, social and emotional skills through working as part of a team".

Growing up, Sue always wanted to sail and never had the chance. "My parents wouldn't let me do it as a kid, and I couldn't afford it as a student," she recalls. What was the appeal? "Kind of the mixture of freedom and self-sufficiency. It adds a whole different dimension to life, really. But equally, when you're on a ship, it's a closed community and you have to cope with whatever happens."

She finally started to realise her ambition as an adult, when her husband bought a quarter share in a wooden boat from a work colleague for £600. After several years of sailing independently, she answered an advertisement from the Trust in 1999. The charity was looking for volunteer crew with Royal Yachting Association qualifications. They were also especially keen on volunteers who had a background working with young people. Sue, an experienced sailor who also happened to work at St John's, had both.

Ever since then, she has sailed with the Trust almost every year, sometimes more than once, and usually during the long summer vacation. With the TSYT she has led a watch on an adult voyage from the Azores, participated in tall ships races in the Baltic and the North Sea, and done a modest amount of "pottering about in the Med". The voyages are typically between a week and a fortnight long. Crews typically sail either in one of four, 72ft Challenger yachts, all of which have been raced around the world, or in the Stavros S Niarchos itself. Each ship has a small, professional crew supported by volunteers like Sue. "We aren't fully-qualified merchant seamen, so our job is basically to tell the kids what to do and keep them safe, and to try to foster the team spirit that we're aiming to create," she says.

Given the backgrounds of some of the young people involved, it sounds like quite a challenge, but as Sue points out, the set-up gives the volunteers an edge from the start. Alcohol is banned (even for the adults), and once they're at sea, none of the crew members can get a mobile phone signal, removing an important potential source of distraction. Each ship also has a professional youth mentor on board.

More importantly, the ship will only sail if everyone works their watchand pulls their weight. "All these people are dependent on you because they are in an unfamiliar situation and that is a big incentive for them to do as they are told," Sue says. "You try to handle that with a light touch, but in the end, when you're undergoing manoeuvres, there's no getting around the fact that someone has to stand there bellowing out orders."

Time and again, she sees that the young crews also learn selfdiscipline. "If someone doesn't want to clean the heads [the ship's toilets], it'll be their peers who turn round and say, 'I did this yesterday; it's your turn today."

Sue acknowledges that the short voyages offered by the Trust are not enough to transform the lives of troubled young people on their own, but she also agrees that they typically emerge from the experience with a gratifying level of newly-found self-confidence.

One of the main hallmarks of any individual's development during a voyage, for example, is the moment when they go "up and



"I think that it's good for kids to dump them in a slightly unfamiliar environment and let them get on with stuff - and to expose them to things that are a bit dangerous."

over"; climbing the rigging as far as the first yard on the mast, crossing over the platform to the other side, and coming back down. By the end of the week, many of them will go right to the top."They're dead chuffed when they have," she adds.

From a selfish point of view, Sue keeps on volunteering with the Trust because of the opportunity to sail on ships like the Stavros S Niarchos. At the same time, though, she feels that the Trust is clearly contributing something important and valuable to the lives of the young people whom it takes to sea.

"Maybe it's the old fogey coming out in me a bit, but I think that it's good for kids to dump them in a slightly unfamiliar environment and let them get on with stuff - and to expose them to things that are a bit dangerous," she says. "It's a very controlled danger, but it's a bit hairy, some of it. And the teamwork aspect is very valuable. Sometimes I find myself thinking it's something I'd like to do with a few of my

### undergraduates!"

Anyone interested in getting involved in the Tall Ships Youth Trust, either as a volunteer or by participating in one of the voyages, can get in touch via the website (http://tallships.org/sail-with-us) or by calling 02392 832055. There are regular opportunities both for those who would like to sail, and for general volunteers.

Image credits: Sue Colwell/Tall Ships Youth Trust Team

Sue helming Challenger 3 in the mid-Atlantic; Challenger 3 in the Azores; Sue with a sextant; Sue and a volunteer on the Royal Yards (the very top of the mast) on Stavros in Teignmouth.

# 10-Minute Interview

with Jane Jones

### We talk to Jane Jones, who retired in July after 40 years at St John's as the HR Officer.



#### o Jane, you've been at St John's for 40 years – you've probably seen some changes during your time here?

Yes, the College was quite different when I started in 1977 as an Office Junior. I suppose the biggest change was the admittance of women to the College. Female undergraduates were only admitted to St John's in 1982. Only a few women came in at a time – but it still came as a bit of a shock to some Fellows and the Head Porter at the time, 'Big Bob'!

### When did you start working in the HR department?

HR used to be called Personnel, but a department didn't exist back then - each Head of Department recruited their own members of staff. When I was appointed as the Junior Bursar's Secretary, I started to work on a few job descriptions and contracts. Over the years, HR duties increased as legislation regarding employment rights came in during the 1980s and early 1990s. I did a CIPD course in 2000 and my job gradually turned into an HR role.

### Have employment rights changed over the years?

Members of staff didn't really have many rights in the early years and weren't given much information – when staff started a new job they were just told when to turn up! But over the years, HR has developed staff rights to ensure that people are treated equally and fairly. St John's has always had a nurturing nature and been good to its staff, but legislation has helped to regulate everything. HR is now a big part of the College.

### Have you seen technology change over the last 40 years?

I have! We used to work with manual typewriters; we didn't have Excel or Word - when we typed lists we left gaps in case we needed to fill in anything later! In the 80s, ciphers were introduced, the forerunner to the current computers – we were all taught how to use them (there were about 250 employees then). I came back from leave one day to find a new computer on my desk, which was a shock! I feel that nowadays we rely on email too much – it has taken the place of personal contact. I prefer a phone call or a face-to-face meeting.

### What structural changes have you seen at St John's?

Where the Fisher Building stands there was just a single story space with a student bar and a meeting room – this was demolished, and the Fisher Building was built there, creating many new facilities. The new Working Library opened in 1994, which was a major development, and as a result of that, F Staircase was extended and G Staircase disappeared. I have also seen substantial changes to Cripps and the Old Divinity School.

## How about departmental changes?

The Personnel department changed its name to HR and it now has much more gravitas. The IT department was established when we started using the cipher machines, the Lady Superintendents team recently changed its name to Housekeeping, and a Conference department was set up, which turned into Catering and Conference. But one of the biggest changes is that we now have a Communications Office - the College is more open than it used to be; its outlook has changed.

### In what sense?

The College realises that nowadays people want more information, and students have greater expectations, which staff have to meet. Previously there was a more 'upstairsdownstairs' feeling – we always called our bosses' Mr' – but now there is much more transparency and openness in order to create a closer College community. St John's is also actively trying to bring in more diversity. The Admissions team now concentrates on access; 40 years ago the majority of students would have come from private schools, but that's changing. The College is also more disabledfriendly – there are lifts in the Combination Room, the Library, the Fisher Building, and the Old Divinity School.

## How do you hope St John's will continue to change in the future?

The College always tries to look after everyone, and I wouldn't want that to change. I hope the bright people out there get the opportunity to come here; St John's needs to continue to address the requirements of different individuals. The staff pull together as a team and I hope they always do so – it's the people who have made these 40 years go by really quickly! But change happens slowly; little happens instantly, even for people who come in and want to make a huge impact immediately. Everything takes time!



► Image credits: Jane speaking at her retirement party. Credit: Paul Everest; Jane through the years: Reproduced by permission of Jane Jones.





aggie retains river Headship in May Bumps

After four days of intense races on the Cam, the crew of the Lady Margaret Boat Club men's first boat, M1, were crowned 'Head of the River' at the May Bumps for the second year running for being the fastest boat on the river. That victory capped a successful week for the LMBC overall in the May Bumps, with men's second boat, M2, bumping their way into the first division. The women's first boat, W1, bumped four other boats in their division, and there were also impressive performances from M3 who also got their 'blades', and W2 and W3 both 'rowed over', with other clubs unable to catch up with them on the Cam. The Saturday evening saw the annual Boat Club dinner at the College, and the triumphant men's first crew marked their achievement by burning an old wooden boat on the Backs.



Johnian awarded the Trevor Reese Memorial Prize for "The British Empire and the Hajj"

Former College Research Fellow Dr John Slight won the Trevor Reese Memorial Prize from the Institute of Commonwealth Studies for his book on the relationship between the British Empire and the Hajj. Dr Slight wrote the book The British Empire and the Hajj, which explores the interactions between imperialism and Islamic practice, while he was a Research Fellow at St John's. The Trevor Reese Memorial Prize is awarded once every three years to the author of a piece of work that has made "a wideranging, innovative and scholarly contribution in the field of Imperial and Commonwealth history".



PhD student wins science writer award for article on sex differences in the brain

Julia Gottwald, a 3rd year PhD Psychiatry candidate, won the Association of British Science Writers Best Student Science Journalist Award. Julia won the award for her article 'Does your brain have a sex?' which was published by BlueSci, the Cambridge University Science Magazine, in Easter 2016. Her winning article shows that human male and female brains are more similar than we think. The Association of British Science Writers (ABSW), founded in 1947, was established to help those who write about science and technology, and to improve the standard of science journalism in the UK. The judges said of Julia's article, "Julia is a natural story-teller who wrote confidently and with some originality about the complexities of our brains.



### Dr Akshay Rao awarded Henry Moseley Medal and Prize

College Research Associate Dr Akshay Rao was awarded the Henry Moseley Medal and Prize for exceptional early career contributions to experimental physics. The medal and prize, which Dr Rao was awarded for "ground-breaking studies into the electronic properties of organic semiconductors, particularly the roles of electron spin in the operation of solar cells" is named after the English physicist Henry Moseley. Dr Rao's research group is currently focused on areas such as solar energy harvesting from different types of artificial devices, as well as the broader study of their interactions with light.



### St John's staff member wins poetry prize

Adam Crothers, Special Collections Assistant at St John's won the Seamus Heaney Centre for Poetry Prize for his debut poetry collection Several Deer, published by Carcanet. The prize is given to the author who the judges consider to have the best full first collection of poetry published in the UK or Ireland in the preceding year. Adam is the first winner of the prize to have been born in Northern Ireland. As the winner he has been awarded £5000 and invited to read at Glucksman Ireland House, New York University, for the annual Tom Quinlan Lecture in Poetry. Several Deer comprises over 60 poems on the themes of destruction, consumption, misogyny, gods, sex, failure and music.

► Image credits: W1 and M2 at the Bumps 2017 – Credit: Laura Day; Pilgrims at the Masjid al-Haram on Hajj in 2008 – Credit: Al Jazeera English; Julia Gottwald – Credit: Julia Gottwald; Dr Akshay Rao – Credit: Dr Akshay Rao; Adam Crothers and the judges – Credit: Seamus Heaney Centre

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