## Byron J. T. Morgan: Statistician, Supervisor, Colleague and Friend

Takis Besbeas, Steve Brooks, Steve Buckland, Diana Cole, Tim Coulson, Emily Dennis, Rachel Fewster, David Fletcher, Stephen Freeman, Olivier Gimenez, Richard Griffiths, Jim Groombridge, Gurutzeta Guillera-Arroita, Achaz von Hardenberg, Mike Harris, John Hinde, Ben Hubbard, Anita Jeyam, Ian Jolliffe, Ruth King, Jose Lahoz-Monfort, Eleni Matechou, Rachel McCrea, Jim Nichols, Beth Norris, Karen Palmer, Roger Pradel, Martin Ridout, Dave Roberts, Carl Schwarz, Giacomo Tavecchia, Mike Titterington, Anne Viallefont, Sarah Wanless, Chen Yu

SUMMARY: There once was a statistician called Byron, Who liked to spend time in his garden; He lay lots of traps, While the moles ran in laps, But he never gave them a pardon.

## 1. Introduction

When tasked with arranging something to honour your retirement at ISEC 2014 we were very concerned. We know how much you hate such events, how you are not even "properly" retired. However, it is only fitting that we show you how much you have shaped our careers (and lives) and what incredible impact you have had—if only we could submit you as a REF impact case study!

This paper compiles short messages and contributions from a number of your past PhD students, postdocs and colleagues. We tried our best to track them all down.

We hope the range of people that have put pen to paper show you how much you have achieved in your academic career.

"Keep researching"

Eleni, Guru, Jose, Achaz and Rachel

## 2. Early work

#### 2.1 David Fletcher

I first became aware of Byron's work when I was a young lecturer in the UK in the 1980's. He appeared to be a perfect role model for anyone wanting to do good applied statistical work. He had also written a very interesting book on Simulation (Figure 1). Like all his work, this book illustrated his ability to write clearly and with insight on an important topic.

My favourite memories of Byron are hearing him speak at conferences. In particular, the most subtle of pauses and raising of eyebrows to indicate a key ingredient in the talk, whether it be some insight into a problem or simply a joke (which is sometimes so subtle as to be missed by the audience).

My worst memory is when I took Byron and Janet to Stewart Island in New Zealand. Both Byron and I were quite sick on the ferry, which runs across a notoriously bumpy stretch of water in the south of the country. He felt so ill afterwards that he was more than happy to cancel a trip to see kiwi in the wild, since it meant we could avoid taking another boat. As those of you who know Byron well, turning down the chance to see a bird, rare or otherwise, is not something he would do lightly!

I have included some photos from Euring 2007 (in Dunedin). I especially like the ones with David Thomson (Figure 2) and the one with Michael Schaub (Figure 3), where Byron looks startled. In the others he is birdwatching with his good friend Jean-Dominique (Figure 4), and cautiously watching a fur seal... (Figure 5)

#### 2.2 Ian Jolliffe

Apologies to Byron for the photo (Figure 6). I seem to have hardly any from the days when I first knew Byron, when we both had plenty of hair. My memory from those days is also pretty patchy, but here are one or two recollections.

For nearly 20 years we were close colleagues at Kent, and we kept in touch after I moved to Aberdeen and then took early retirement. Byron was kind enough to set up an Honorary Professorial post for me at Kent after my retirement, and I helped in a small way to supervise one of his research students, and was involved in the early days of NCSE. During my previous time at Kent we collaborated on various aspects of research, but also spent many a lunchtime running in the

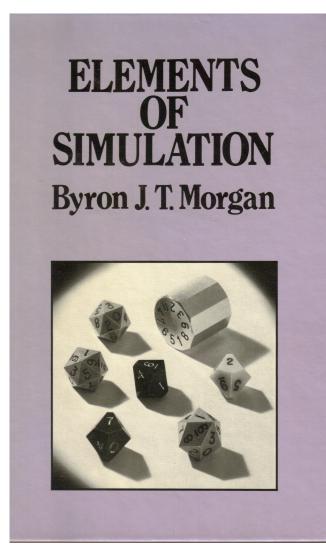


Figure 1: Byron's first book

woods, while occasionally running down other members of the University.

One collaboration 30 years ago, which also involved Byron Jones, produced a whole string of papers concerned with dividing the elderly into clusters. Now that we are old enough to be classified according to these results it appears that we are both in Cluster 6 and that the characteristics of the clusters have not changed drastically in 30 years. As well as the collaboration and social running, we also went on the road, giving courses at a variety of sites. One of those was TNO in the Netherlands, where we looked distinctly stunted in stature compared to most of the participants. I recall a discussion with our host, Peter Defize, over a jenever or two, in which I think he said that every few years he had to raise his house on extra layers of sand to avoid flooding. This could have been a useful idea for Byron in the recent wet winter, when I understand that he needed a pump to keep the water at bay (Figures 7 and 8).

Byron has some responsibility for me getting as far as I did in my career. In the early 1970s there was no real training



Figure 2: Byron and David Thomson in Dunedin, Euring 2007

for new lecturers and, apart from teaching, I was probably drifting rather aimlessly in what I should be doing. After Byron's arrival, and particularly when he was promoted to Senior Lecturer, I had a much clearer idea of what I wanted to do and should do. He was a role model. My achievements are more modest than his, but would have been significantly lower without his in influence.

Many thanks, Byron, and all the best for your retirement, if that ever really happens.

## 2.3~John~Hinde

Byron, we first met in 1974 when I arrived at UKC as an MSc student and you were my tutor. I'll never forget the probability theory course you gave with numerous asides and additions, solutions to which would appear as cyclostyled notes the next day. They got me thinking and interested, something you never fail to do. You were also responsible for my first publication, when you very kindly included me on a paper – I think that my contribution was rather small, but I do recall the fun in trying to get a solution to some rather strange stochastic process. I know that you have started many others off in their careers in the same way. Sadly, I never got to do a PhD with you, but that's another story.

Then over the years our paths have crossed many times, frequently through IBS (international Biometric Society) related activities; always a chance for us to mutually moan about



Figure 3: Byron and Michael Schaub in Dunedin, Euring 2007



Figure 4: Byron and Jean-Dominique in Dunedin, Euring 2007

the various aspects of society bureaucracy and idiocy that annoyed us. I also recall a mutual dislike of music and enforced participation at conference dinners, leading to us sharing a corner and some cans of beer in Cairns.

The picture of the two of us (Figure 10) at the IBC in Montreal in 2006 was a prelude of IBS-related things to come,



Figure 5: Byron watching a fur seal

first in the BIR and now in the International Society little did I know at the time, hence the rather carefree demeanour. I had the great fortune to follow you as President of the British and Irish Region (BIR) and gratefully inherited a very active and willing committee. You also brought back the Summer Meeting as a wonderful opportunity to visit interesting places and indulge a general curiosity in the greater world of biometry, not just technical matters. Now I look forward to many more years of trying to put the IBS to rights, when I eventually join you as a past-President on the Club of Presidents.

So, I wish you all the best for your retirement, but I know that this is unlikely to slow you down nor dampen your enthusiasm. Also, I hope that you will continue to have the opportunity to inspire new generations of researchers there are many of us that are grateful to you. Of course, I hope that you also have time to be able to complete your butterfly spotting list and to continue to wage war on the moles of Canterbury!

# 2.4 Mike Harris and Sarah Wanless

See Appendix A.

## $2.5\ Mike\ Titterington$

Hello, Byron. It's a privilege to have been asked to contribute to this set of reminiscences. I hope that what I write will be more or less correct, but I am somewhat taken aback to realise that it is nearly 47 years ago that we both arrived in Cambridge, you to start your Ph.D. with Violet Cane and myself to take the Diploma course which turned out to be a preliminary to doing a Ph.D. with Peter Whittle. Memories of that time include lunches at the University Centre, with "dessert" usually taking the form of a small bar of Cadbury's Dairy Milk, I seem to recall. The instigators of these reminiscences have encouraged the inclusion of photographs. I can't do better than to provide a link to the well-known gallery of photographs of members of the Statistical Laboratory (www.statslab.cam.ac.uk/Dept/Photos/) with particular reference to the photos for 1968, 1970 (Figure 11) and 1971; plenty of familiar faces there!

A further shared experience in Cambridge was when we

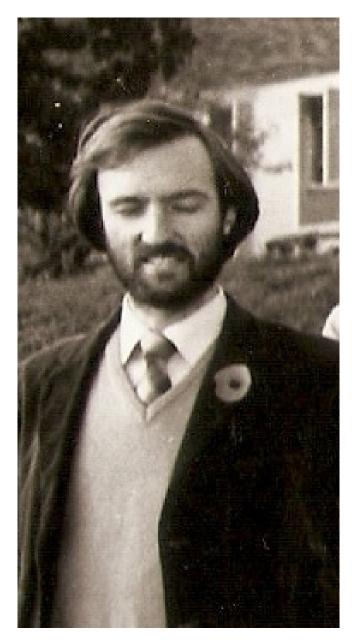


Figure 6: Byron back in the good old days...

both lived in the terraced house at 49 Chesterton Road, along with six others, various bicycles, your Churchill College oar (I think) and your Morris 1000. Living in this house was a genuinely communal experience, with a rota for preparing the evening meal and organisation of a number of successful parties. As you know, the house now forms part of the Arundel House Hotel. Do I recall that you once revisited the hotel to check up on what they had done to your old room?

We have kept in touch continuously after we both left Cambridge, in particular on a sailing holiday in the Inner Hebrides (notable for fresh line-caught mackerel and a dodgy in-board engine that only just had enough power to overcome adverse tides) followed by a brief, very windy camping trip as far as John O'Groats.

We have managed to find time for a bit of collaborative



Figure 7: Byron battling with the floods.



Figure 8: Byron's flooded garden

work, leading to two papers, separated by 33 years! The first of these, in 1977, involved in part showing that algorithms of yours could be interpreted as versions of the EM algorithm, which was at that time just bursting on to the scene. This allowed the new algorithms to inherit the elegant properties of EM. Then, in 2010, Diana Cole and you kindly gave me the chance to contribute to a paper on your parameter redundancy work.

That's enough of the technical stuff! Back to more personal issues. I have fond memories of meeting your parents in 1970 when they kindly put me up when I went for the now-defunct Swansea to Cork ferry. I recall that we had an afternoon at Three Cliffs Bay, discovering only later that part of the bay was claimed to be distinctly unsafe! Then, in 1979, I was honoured to act as your Best Man at your wedding to Janet, and some years later to become Godfather to Leo, a role which I regard as a continuing privilege. Your wedding took place at St. Buryan, within a very few miles of the extreme south-west of Cornwall. I'm pretty sure that we did drive down to Land's End itself at that

time, thereby complementing the above-mentioned visit to the other extreme of the British mainland!

So, Byron, congratulations on your long and highly successful career, and all best wishes for your retirement, whether or not you really are retiring. The only major blot on the past 47 years has been that in rugby the matches between Wales and Scotland have resulted in 31 wins for Wales and only 16 for Scotland! (There was an extra match in 2003 and one draw.)

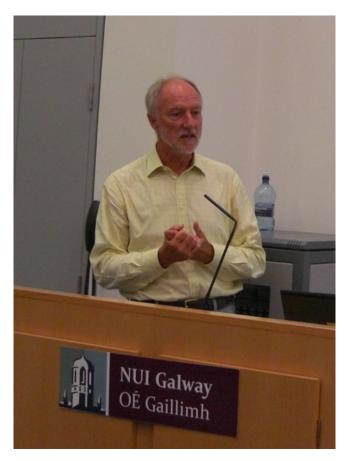


Figure 9: BIR Summer Meeting to Galway, 2011



Figure 10: At the IBC in Montreal, 2006

## $2.6 \ Stephen \ Freeman$

Byron, I don't think I would have imagined that I'd be sitting here now writing this when I started my PhD in 1986. Immediately prior to that I wouldn't have imagined that a Maths degree would, or could, lead one to a career in ecology and conservation at all, or indeed that things like ISEC and the NCSE would be well established by the early 21st century. So I'm really grateful for the start that I got at UKC 25 years



Figure 11: Statistical Laboratory, University of Cambridge, 1970



Figure 12: A colleague of Professor Morgan's on the joint 'Lulworth Skipper' expedition to Dorset, July 2013.

ago, and all the interesting places (physical and metaphorical) that it's led me to since (Figure 12). So enjoy your celebration. A good time and place to increase your butterfly list too I should think ...

#### 2.7 Steve Brooks

I met Byron whilst I was taking the Statistics MSc in Kent in 1991. He taught the medical statistics course, earning himself the nickname amongst the students of "Dr Death" partly because of the rather morbid focus of the course being on time-to-death under various, often ingenious, scenarios and partly because of his very dry sense of humour that I perhaps only later came to really appreciate. At the end of the course, I was unable to get on to the PhD programme that I was hoping to (which was fortunate as it turned out) and Byron scraped together enough funds to take me on as a research assistant for a year whilst I re-applied. This was a fantastic opportunity and a brilliant year in which Byron had me working on a wide variety of projects all of which were the perfect building block for my subsequent PhD, kick-starting my CV with 5 papers even before I'd started my PhD. At the end of the year I went off to Cambridge for my PhD, but when I went

to Bristol as a lecturer in 1996, Byron and I were able to link up again as I began to look for an area in which to apply my new-found technical skills in MCMC methods. This was the start of a long, fruitful, rewarding and enjoyable collaboration involving many joint papers and grants and culminating in the creation of the NCSE in 2005, jointly with Byron and Steve Buckland. Byron has always been the perfect collaborator and mentor- thoughtful, generous and inspiring and I have always tried (though not always succeeded) to live up to his example. Without his patience, generosity and support my career would be have been very different and much of the credit for my success (such as it is) is down to Byron. Having left academia in 2006, my working with him is probably the single thing that I have missed the most and I wish him all the very best in his retirement.

#### 2.8 Steve Buckland

Byron and I attended an IBC in Budapest just as the Iron Curtain was beginning to weaken. After the conference, we hired a car to go birdwatching. All the minor roads had a road sign with a red circle on white. We later learned that this meant entry was forbidden, but as all the country lanes seemed to have them, we decided to ignore them. So we took the next lane, which took us up a large hill. As we approached a building, there was washing hung across the road, preventing us from going further. While we were stopped deciding what to do, a soldier came out of the building, staring at us. I quickly turned the vehicle and headed down the hill again. Fortunately there was no pursuit!

We carried on, and eventually found a lane that didn't have one of the road signs. It also signposted a cafe, which sounded promising as it was around lunchtime. When we got to the cafe, in the middle of nowhere, it looked extremely unpromising, so we did not go in. As the road to it was very rough going, and as we hadn't passed any signs of human habitation, we decided we must have come in by the back way, so we headed on past the cafe, and off the hill. However, the road detiorated even more, into a rough track with large boulders - and because it was steep, it got to the point where we would have real difficulty if we tried to go back the way we came. At this point, Byron got out the car and jogged, to give the car more clearance. By now, we were thinking that we would have to abandon the car, especially when we came to a particularly large boulder in the middle of the track. Eventually, I drove the car up onto the steep bank, and let it slide back down beyond the boulder. Fortunately, that was the last obstacle before arriving at a village, and we managed to get back onto passable roads again.

One other memory from that journey was driving around a corner, and being confronted by a huge wild boar in the middle of the road. I had no idea they could be so big.

Moral of the story: don't let Byron's enthusiasm for birdwatching over-ride your better judgement when in strange lands ...

#### 2.9 Ruth King

One of my first meetings with Byron was when he acted as the external advisor for my PhD thesis (13 years ago!). I can still recall my viva when Byron, prior to the official start of the viva (possibly to help me relax a little?!), told the story of a recent viva at Kent, where they sent out for sandwiches after 5 hours... The formal viva followed by going through each chapter of the thesis in turn and the memorable line at one point from Byron where he stated "at the beginning of this chapter I was really, really excited,..., by the end I was really, really disappointed" (the internal examiner laughed and even after this time I have not forgotten it!). The most important thing was that he passed me (and in just under 3 hours)!

I am very pleased to say that from that time onwards my interactions with Byron have continued to be interesting and (more importantly) exceedingly good fun. Not least, close to completion of our co-authored book (Figure 13), when I once phoned Byron to get the response "ah... you were the last person I was hoping it would be". I do not think that I have ever spoken to Byron for more than 5 minutes without being told at least one funny story - often related in some way to ecology - be it herons eating the goldfish in his pond; frozen song thrushes being stored in his freezer; a mouse eating electrical cables in his car (leading to the new currency of a "mouse"); a potential brush with funnel-web spiders; and the notorious (and continual) moles in his garden (and his setting mole traps in the snow (Figure 14)).

It has been my great pleasure to work with Byron over the last 10+ years - and it has made a real difference to my academic career (and even in retaining my sanity at times!). Byron will be very sorely missed both personally and professionally (though not gone yet!).

#### 3. Across disciplines and countries

## 3.1 Achaz von Hardenberg

In the beginning of 2009, me, a wildlife biologist, working in a national park in the Italian Alps, mostly on furry critters such as Alpine ibex, chamois and marmots (but luckily not on moles...), had the crazy idea to take a year off my job at the park, and spend it in a statistics department somewhere in the UK. My aim, besides tasting real English Ale, was to get a better understanding of cool sounding esoteric terms such as "joint likelihood", "Bayesian statistics" and "state-space models", at least to a sufficient level to be able to show off with fellow biologists. After a bit of googling, I discovered Byron and his research group at Kent University, part of National Centre for Statistical Ecology. Statistical Ecology? wow! I admit this was the first time I heard about this discipline, and reading Byron's papers opened me a world of incredibly interesting new approaches to better model the data I had available on my favourite critters! I thus shamelessly sent an email to Byron to explore the possibility to join his research group at Kent University as a research fellow with an external scholarship. Trained primarily as a zoologist, and with a DIY approach to statistics, sincerely I did not have much hope he would reply favourably, if at all... Much to my delight however, his reply arrived almost immediately and was enthusiastic, showing me from the very beginning Byron's openmindedness and generosity. After securing the funding, thanks to which Byron had a crash course in the Byzantine bureaucracy of italian funding agencies which profoundly strained

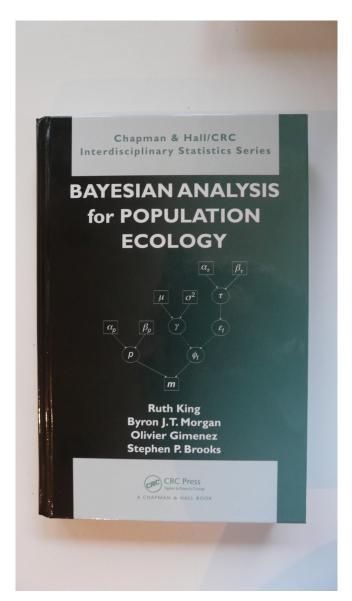


Figure 13: One of Byron's most recent books: Bayesian Analysis for Population Ecology.

his patience (I can't remember the countless documents he had to sign and send me back to Italy by express courier!), I finally arrived to Canterbury with my family in September 2009. Thanks to Byron's hospitality, curiosity and intellectual generosity I thus spent one of my most productive and mind blowing years, in which, not only I got an addiction to Kentish Ales, but also actually learnt more about statistical modelling applied to ecology, than in the previous 20 years since when I started university. This got so far, that now people really believe I actually understand something about this stuff and foolishly even offer me teaching opportunities in this field.

I will always be thankful to Byron for the great opportunity he gave me! I hope that he will now find the time to come to visit me in the Gran Paradiso National Park, to see with his eyes the Alpine ibex and marmots he loved so much to discuss about!



Figure 14: Byron taking on the moles in the snow

3.2 Anne Viallefont See Appendix B.

## 3.3 Carl Schwarz

A well deserved congratulations on your retirement, Byron. It was pleasure working with you during our overlapping editorial terms at JABES. Your wise leadership and counsel helped me enormously during my term.

#### 3.4 Dave Roberts

One of my fondest memories is my first research meeting with Byron and Rachel in the Gulbenkian, Byron had just had a paper accepted and was excited about to the extent that I couldn't get a useful word out of him! It is now a running joke when having a meeting as to whether he has had a paper accepted recently and therefore if there is any point in having the meeting! But I guess coming to retirement it is good to still be excited about getting papers accepted, I hope I am!

## 3.5 Giacomo Tavecchia

I firmly support Byron's new projects (find my letter of support in Appendix C).

## 3.6 Jim Groombridge

Byron's involvement has been exceedingly valuable in a recently completed PhD project by Rachel Bristol which focused on analysis of ecological data of a reintroduction of critically-endangered Seychelles paradise flycatchers. What has struck me most has been Byron's exceptional patience in explaining reasonably complex statistical analyses to students (and to their supervisors!). When I visit Byron's office I am always struck by the alarming neatness of his office, the almost perfect alignment of printed copies of manuscripts that he is working on and the lack of clutter in his office! To me this gives a sense of what the inside of his brain must look like ordered, clutter-free and neatly aligned!! I strive to emulate these qualities in my own work and fail consistently!

I have no pictures of Byron unfortunately, but I was extremely grateful to receive from him, a photo of the 'Student's t' plaque in Canterbury which he sent to me recently (Figure 15).



Figure 15: Plaque commemorating Gossett's birthplace.

I am sure I can say that on behalf of DICE we are thrilled that Byron will remain an active member of the University for several years to come and we look forward to engaging his mind!

#### 3.7 Jim Nichols

You have been an important fixture in the international community of ecological statisticians for my entire career, and it is hard for me to imagine that you have retired (although it sounds to me as though you are cheating and still managing to work). Although I knew of your work well before then, I believe that I first met you in 1992 at the Montpellier EURING meetings. I have attended every EURING since Montpellier, and my recollection is that you have done so as well. It is always a pleasure to catch up with you a bit at these events and to learn of all the great work being conducted by your group.

At the last EURING in Athens, Georgia, I recall being out at a downtown bar rather late one evening with a few former postdocs. I noted that all of the other guys near my age who had been at the place earlier in the evening had sensibly departed. But who should show up but you, with a small group of students and postdocs, ready to carry on into the wee hours. May you continue such behavior for the next several decades.

#### 3.8 Olivier Gimenez

When I think of what to say to Byron, the first thing that comes to my mind is THANK YOU for being who you are.

Thank you for being so supportive of your - sometimes lost, always in doubt - students.

Thank you for your positive words and encouragements that changed my life in research: "keep up the good work", "excellent", "that's a good idea" are some of your expressions I now use with my own students (among other things) with the same boosting effect. Thank you for your very british way of seeing things and reacting gently to difficult situations, very inspiring.

Thank you for being so reactive at work, so on top of many things; again, that's something you taught me and that I try to apply in my own career.

Thank you for passing on to me your mojo: "one idea = one paper", it has proved very useful.

Thank you for your curiosity that brought so much to statistical ecology (thanks for giving up on probability with which you got lost at the beginning of your career:):) your research has had a tremendous influence in fields as diverse as the revival score tests, the development of integrated pop modeling, parameter redundancy, capture-recapture models, ring-recovery models, multivariate analysis, cluster analysis, stochastic models, occupancy models, birth-and-death processes. Thank you for your amazing list of books: Elements of Simulation, Analysis of Quantal Response Data, Capture-Recapture Analyses, Applied stochastic modeling, Bayesian analysis for population ecology.

Thanks to Janet and the kids, because Byron without Janet wouldn't be Byron.

Thank you for making it possible to be where I am today. I remember as if it was yesterday: when I got my Marie-Curie grant, I wrote you and Steve a long message to tell you that I wanted to decline the grant and stay in France. You suggested that I should keep it and that I could stay in France and spend short periods of time in Kent; I think you ended up actually spending more time in Montpellier that year than I spent in Canterbury (thanks for being such a "bon vivant" by the way!) :) More seriously, your understanding contributed partly to Eleni and I having two beautiful kids in our life, whom we almost named after you, Byron and Morgan!

Thank you so much Byron.

#### 3.9 Rachel Fewster

I first met Byron in 1998, when I was lucky enough to have him as my PhD examiner. Many's the time I've considered how fortunate I was to have the opportunity to connect with such an outstanding researcher, scholar, and role model at that early stage of my career. Byron has been a constant support and mentor ever since. He has been behind more invitations and references than I can remember, and I'm sure there have been many others that I don't know about.

From the very beginning, Byron showed his kindness, modesty, and humour as well as his insight and leadership. He adapted his own schedule so that I could have my PhD exam less than a month after submitting the thesis. When visiting our group in St Andrews, he would engage with whatever was going on at the time, even going to student concerts. I remember he harboured a long-unfulfilled ambition to visit the Isle of May, which was forever on the wrong side of a stormy sea during his visits. When my winter PhD exam did nothing to improve matters, Byron suggested that the exam committee should instead repair to a bird hide on the Eden Estuary, where we were certainly the best-dressed visitors of the day.

I don't think there is anything that Byron doesn't know about. One of the most extraordinary things I have ever seen was at the EURING 2007 conference in Dunedin, New Zealand. Indeed, if you google images for "Dunedin 18th



Figure 16: Comet McNaught, 18th January 2007

January 2007", you will see it too (Figure 16). We had a nighttime conference excursion to see nesting titi or muttonbirds. I remember Byron mentioning that a comet should also be visible that night. Expecting the usual blurry streak in the sky, I was bowled over by the blaze of fire that materialised as we crested a hill. As a matter of fact, I forgot about comets altogether and thought that Dunedin had gone up in smoke. No wonder the ancients saw comets as some kind of omen. It must have been a good omen, because we did indeed have a lot of fun with the muttonbirds, whose idea of alighting at a nest sight is to crash-land at speed just metres away from human onlookers; and the rest of the conference turned out rather well also.

Byron's enthusiasm, open-mindedness, and willingness to engage with all aspects of the wider world reflect his contributions to our profession. He has been everything I can think of, from journal editor to society president to organiser of conferences. Indeed, whereas other people might organise conferences, Byron creates new conference series. He is a superb role model, and his support of early-career researchers is legendary: you can always detect Byron's hand in organising a conference session, because he chooses the invited speakers to be early-career academics for whom the prestigious invitations will score the most benefit. It's been a privilege to know him and learn from him in all aspects of professionalism as well as from his research and scholarship, and I am certain that his influence will continue to live on in our discipline for decades to come. He personifies the ideal academic as expressed by scholar F.J. Foakes Jackson: "It's no use trying to be clever we're all clever here. Just try to be kind."

Just one more thing. On that auspicious day when Byron examined my thesis, one of his chief complaints concerned my insistent use of dangling participle clauses. To this day I have never known what a dangling participle clause is, despite a number of abortive and bamboozled attempts to find out. I have taken advantage of this occasion to sort it out once and for all. After surfing the net, the dangling participle clause is finally illuminated. That was one of them. Many thanks, Byron: I have at last untangled the dangle!

#### 3.10 Richard Griffiths

When I first met Byron several years ago, I thought I had met him before. I hadn't, but there was something very familiar about him. It then dawned on me that his gently lilting Welsh voice was identical to that of the Archbishop of Canterbury of the time, Dr Rowan Williams. Perhaps it is not surprising, as much the same techniques are used in delivering lectures and sermons!

#### 3.11 Roger Pradel

You are an open-minded person and I suspect you of understanding French very well. So as it is easier for me, I will challenge you by continuing in French. Tes caractristiques les plus appreiables sont pour moi ta gentillesse et ta patience. Merci pour elles. Ta grande comptence ne t'empche pas de te mettre la porte de ton interlocuteur. Merci pour ces efforts. A titre plus personnel, je dois avouer que j'ai t surpris le jour o voulant te taquiner sur une dfaite de l'Angleterre en rugby, tu m'as dit que tu tais en fait ravi de la victoire du Pays de Galles ! Depuis, le pays de Galles m'est particulirement sympathique!

## 3.12 Tim Coulson, University of Oxford

Memories of collaborating with Byron from an ecologist and one-time statistical Luddite.

The first time I met Byron, sometime in the early 1990s, the most sophisticated statistical analysis I'd ever come across was logistic regression. This deep statistical knowledge had resulted in me being considered a bit of a statistical guru in the small institution at which I was then based. But at our first meeting, Byron (and Ted Catchpole who collaborated on many papers we did together in the early days), soon led me to realize that the field of statistics was substantially more complex than the command (that I've subsequently forgotten) for conducting generalized linear models in Genstat. I sat there getting more and more alarmed as Byron talked about confusing things like recapture probability and recovery probability. So I suggested the only sensible course of action that I could think of: that we head to the pub for lunch.

As soon as we arrived at the pub I realized that the fledgling collaboration between Byron and I was going to last. Here was someone else who thought it perfectly acceptable to have a couple of pints over lunch on a workday! Not only that, but by the time the second pint was finished, recapture and recovery probabilities were no longer confusing. The likelihood written on the paper napkin was still all Greek to me, but at least, for once, bits of it actually looked Greek.

The first paper Byron and I published together was what would now be considered a rather run-of-the-mill markrecapture analysis. But at the time it was state-of-the-art, and it had a considerable influence on the field of ecology. Over the years since then, Byron has taken me, along with many other ecologists, on a statistical adventure. Byron has taught me the difference between Bayesian and Frequentist methods, and introduced me trans-dimensional simulated annealing, reversible jump Markov Chain Monte Carlo and Gibbs samplers. But more importantly, Byron's work has provided general ecological understanding of myriad systems all over the globe.

Some of the statistical parlance Byron has introduced me to has even sunk in. An ecological colleague from Scandinavia who was living in Scotland once bemoaned to me his lack of success with British women. I'll spare his blushes by changing his name. On questioning, I discovered his opening gambit was "Hello, I'm Jorn, and I teach statistics". It became clear to me why he was still single. Byron's tutelage meant my statistical lexicon was now sufficiently advanced I was able to modify the poor chap's chat up line to "Hello, I'm Jorn, I teach statistics and you've just run out of degrees of freedom". The line, rather sadly, worked and Jorn is now happily married. So Byron's efforts have not only advanced statistics and ecology, they have also made one Finn very happy.

The collaboration between Byron and I was becoming rather one sided. Byron was coming up with all the ideas and writing the papers, while I was primarily just knocking data into an appropriate form for analysis. The time had come to show Byron what us ecologists did. It was time to take Byron up to Scotland to look at red deer (Figure 18). We went up in May, sometime in the early 2000s, which is the time that red deer on Rum calve. I installed Byron on a bleak hillside with a telescope, and told him which deer to follow - a female who'd looked pregnant a couple of days previously, but didn't look pregnant now. He was to radio through when she went back to suckle her calf that she would have hidden somewhere in the heather. Meanwhile I went off to do something presumably much less mundane.

After the first day, I started to doubt Byron's field skills. He'd been following this deer for an age, and she'd not returned to her calf. An identical chain of events followed on day two. Following discussion with other deer biologists on the island we eventually concluded that in fact the deer had probably never been pregnant, and poor Byron had been sat watching an animal go step-step-bite, step-step-bit for the best part of a weekend. It is testament to Byron's good humour that he never complained, nor pointed out that we were clearly a bunch of charlatans who knew little about deer. On the plus side, I suspect Byron can now recognize a red deer from miles away.

So Byron, good luck in retirement. I hope all that this means is that you cease to teach and continue to conduct research. And do keep in contact: have you ever watched a "pregnant" Soay sheep?



Figure 17: Red Deer on the Isle of Rum, 2004.



Figure 18: A familiar view for Byron on the Isle of Rum

#### 4. Most recent developments

#### 4.1 Anita Jeyam

Thank you for all your support and advice, starting back from the PhD application process. You were always so kind and patient when answering my 50,000 questions, whether it was about statistical ecology, fieldwork and form-filling! Also it's fascinating to hear about all the animals you've met, especially the random encounters such as the Kaka sitting on your shoulder (Figure 19), thanks for sharing all that (and the location to the secret kiwi Island in New Zealand)!

#### 4.2 Ben Hubbard

I want to take this opportunity to thank you for your help at possibly the start of my academic career! Your help with my presentations and abstracts, your view of where our work fits into the wider landscape in ecology, and the time you have given to my written work has been vital in completing my PhD. I have enjoyed your stories at the various conferences we have been on over the last few years: I especially remember our adventures in Georgia, USA, and particularly drinking on



Figure 19: A Kaka making friends with Byron, New Zealand 2008.

a rooftop bar and Takis' search for a "martini" which ended up being pretty fruitless! I am sure I am not the first one to be inspired to take statistical ecology by yourself, and I will probably not be the last one either! Enjoy your "retirement" and I hope we still get the chance in the future to collaborate once more!

## $4.3 \ Beth \ Norris$

Thank you for being such an inspiration, and for all the support throughout my PhD and beyond. I hope that you will spend your retirement happily relaxing and not killing too many more moles in your garden.

#### $4.4 \ Chen \ Yu$

I gave a LOT thought of what I wanted to leave in your paper. But it took me a long time to get it done. That is because writing is really not my strength and I can't write well. In one of our meetings, I think you said, I quote, "Your writing is very concise." That was an accurate comment. So here is what I am going to do, keep it concise.

You have been a brilliant supervisor to work with and I am very proud to be one of your research students. I know you have been very patient with me and always supportive. My writing must have caused you a trouble to correct every single draft I have sent to you. I heard quite a lot about you from the Chinese students on the MSc Statistics course over the years. We all like you very much!

You mentioned several times about yourself being "quite old". I don't usually know how to respond. If I were to link you with the word "old", you are an old wise person. In Chinese, you would be called an

智慧老人

I really enjoyed working with you. It's been a nice experience in my life. It's actually a quite important time of my life. From the deepest of my heart, I want to say, thank you!

PS: I have bought a copy of your stochastic modelling book (Figure 20). I haven't found a chance to ask you to sign it. It would be nice to have a signed copy.

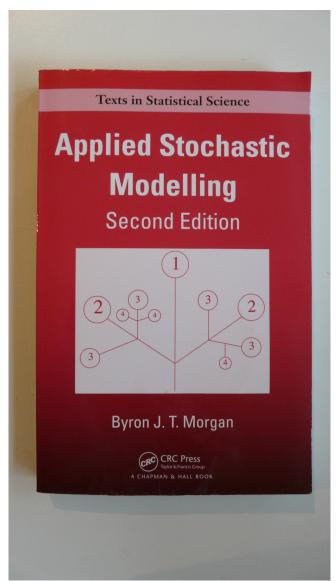


Figure 20: Applied Stochastic Modelling, 2nd Edition.

#### 4.5 Emily Dennis

I feel very grateful and lucky to have you as my supervisor. Your knowledge, enthusiasm and encouragement are invaluable. Thank you for your continuous support and patience and for dedicating so much time dedicate to my supervision. It's a real pleasure working with you, in part because you are both friendly and approachable and give me confidence in what I can do and achieve. It's of course also great fun to have someone to share tales of butterfly trips with and compete for the longest species list! I always enjoy trying to identify

It's a fixed phrase we use to describe a person like you.



Figure 21: Emily and Byron

species in your (often blurry!) photos. In fact by the time you read this you'll have probably overtaken me, especially now you should have some more free time to enjoy yourself!

4.6 *Gurutzeta Guillera-Arroita and Jose Lahoz-Monfort* Thank you Byron!! (see details in Appendix D).

#### 4.7 Karen Palmer

It's not until I did a PhD that I appreciated the wealth of knowledge that you possess and admired all that you have achieved in your career. Thank you for all your patience in imparting some of this knowledge to me and encouragement and faith in me during those times when I could not see the light at the end of the tunnel. Our meetings were always filled with humour and there are some moments that have remained in my memory, such as when I was told off for being several seconds late according to your brand new watch! You were constantly trying to improve my written work too by pointing out that I split infinitives - I highly suspect that I still do this despite all your efforts. I have enormous respect for your talents and wish you a happy retirement, which I am sure will still involve a lot of statistics.

## 5. Kent

5.1 *Diana Cole* See Appendix E.

#### 5.2 Eleni Matechou

Supervisor, collaborator and now colleague. I guess the point of this message is to tell you what a huge impact you've had on me but that's not an easy task! It's easy to quantify research outcomes, but I learned much more from you than just how to do research. The way I interact with colleagues, the type of supervisor I am myself, the way I teach, have all been influenced by you.

What I remember most about my PhD interview is how much we laughed. And every meeting after that, even when things got tough or stressful, was the same. So I thought it would only be appropriate if I found something funny to write, but instead all I can think about is what a big part of my life you are and how happy I am that I'll get to learn even more from you in the future.

#### 5.3 Martin Ridout

It's a pleasure to add a few words to this collection.

I first met Byron in 1986, shortly after I moved to Kent (the county, not the University), at a Local Group Meeting of the Royal Statistical Society. At the time he was Editor of Applied Statistics (this was in the days when the journal had just a single editor), and was handling one of my first submissions to a statistical journal - we started on a good footing when he accepted the paper in due course!

By a process that I can no longer recall, we soon found ourselves collaborating on a paper about digit preference in retrospective fecundability studies, to the considerable bemusement of my employers, who thought they had employed me to work on horticultural problems. This was the first of many interesting collaborations in areas such as bioassay, finite mixture models, score tests, yeast prions and microbiology. These last two areas were joint work with Diana Cole who started out as our co-supervised PhD student working on inflorescence patterns of strawberry plants.

Byron was kind enough to arrange a succession of honorary appointments for me at University of Kent, something that I now realise was no small bureaucratic achievement. Eventually I succumbed to the temptations of a permanent position at the University, doubtless much to the relief of my horticultural employers, and over the last 14 years we have cosupervised a number of PhD students and postdocs, particularly in statistical ecology, several of whom are contributors to this collection.

Until I did the maths, I hadn't realised that I have known Byron for almost exactly half of my life (of course it's a much smaller fraction of his life). I've greatly valued his friendship and advice over the years. Quite apart from his breadth of knowledge of the subject, any collaboration with Byron benefits from his boundless energy and enthusiasm, and his perennial optimism in the face of the occasional report from a referee who hasn't fully appreciated the elegance of a paper at its first submission. I've had a lot of fun working with him, and hopefully there's plenty more to come!

5.4 Rachel McCrea

See Appendix F.

#### 5.5 Takis Besbeas

I owe so much to Byron Morgan.

For more than twenty years, Byron Morgan has been a major presence in life. On the occasion of his teaching retirement, it is delightful to reminisce about the many wonderful interactions I had with him, and the impact he had on my individual development.

I first met Byron in Canterbury in 1992. At that time, I was an undergraduate of Mathematics at the University of Kent. In my second year I attended a course taught by Byron on Medical Statistics. The lectures were thrilling, and despite Byron's beautiful handwriting on the blackboard, I dropped the course after about two weeks! I was certainly not aware that Byron was a distinguished academic. However I decided to choose Statistics rather than Mathematics for my third year undergraduate and postgraduate studies, and when I expressed an interest to do a Ph.D. with him in 1995, I was delighted that he accepted me. I didn't see Byron very often in my postgraduate research years (1995-1998) because I only went to him when I had something to say. However every conversation opened my eyes in one way or another and every interaction with him was a pleasure from start to finish. From that time onward, Byron has been a bright light in my life.

Powered by Byron's recommendation in 1999, I took up a 6month postdoctoral fellowship to work with Phil Brown before a second three-year fellowship under his supervision. I will be forever grateful to Byron for taking me on twice! The first ever integrated population model in ecology was fitted during that time but of course Byron's substantial research achievements are too numerous to mention. I was then able to join Byron's group in a lectureship engineered for me by Byron in 2003, and some of the happiest years of my professional life followed. Byron inspired me. He was always approachable, always fair, never cross (well, not visibly, anyway) and cleverly got the best out of me. I cannot easily describe how much I have gained over the years from Byron- from his intellect and wisdom to his kindness and generosity.

Ecological Statistics @ Kent went from strength to strength under Byron's leadership, achieving international recognition, establishing the National Centre for Statistical Ecology in 2005, and founding the International Statistical Ecology Conference where we are today.

Everyone who has interacted with Byron knows he is a delight to be around. I have continuously been in personal contact with Byron ever since I was his student. I am greatly privileged to count him as my friend as well as my mentor. I admire his longevity in world-class research and look forward to many more interactions with him. If I were ever asked to single out the most influential person in my professional life, I would not hesitate: this is Professor Byron Morgan.

Happy retirement from teaching Byron. And a million thanks!

#### Acknowledgements

Thanks for everything Byron!

13

## SUPPLEMENTARY MATERIALS

## Byronmetrics, July 2014

APPENDIX A: MIKE HARRIS AND SARAH WANLESS

## To Byron

Hope this image will bring back happy memories of CMR analyses using Isle of May seabird data and a long and productive collaboration between you and your group and us and the ITE/CEH team. Sadly the sea wasn't always as smooth as it is here and your plans to visit the island were thwarted several times by bad weather. We hope that your 'retirement' will give you more time to do things you enjoy and if you find yourself north of the border in the seabird breeding season you'll take the opportunity to come out to the May (and let us know you're coming!)

# All the very best for the future and do keep in touch

Mike and Sarah

## APPENDIX B: ANNE VIALLEFONT



Dear Byron,

Does this car remind you something?

When I was a (young) student in Montpellier, I once drove you and colleagues (probably Ted Catchpole and someone else) to the countryside for... BIRDWATCHING!... in the very car that is drawn on this watercolour – only the plate number has changed.

As a very poor birdwatcher, I have no idea which species we did or did not see that day, but I remember very well that I almost went out of gasoline on our way back, and was quite worried to get stuck in the middle of nowhere with four pairs of binoculars but no tank to carry gas... and of course no cell phone – that just did not exist.

Well, this says how long ago this occurred, and this illustrates your extraordinary fidelity to people you have once worked with. I am very grateful to you for including me in interesting projects over the years, rather than "turning the page" after something is finished...

One of the best decisions I made was to ask you to referee my Ph.D. And naturally when I looked for something interesting to do on a "sabbatical" year I asked you to come to Canterbury and it was both professionally and personally a great time. We can add to that many very interesting discussions, exchanges, and I really wonder how come you can retire so early when you still have so much advice to give to younger researchers!

Now, of course, retirement is one more challenge that you will certainly take on with your usual (ô! so) British composure. Maybe you'll take more time for sport, for listening to bats in your garden or looking for newts in your pond... but I wonder : are you going to take the time to have a decent (and by decent I mean French) lunch? ... something more than an apple and a cup of hot chocolate?

Well, when I come back to Canterbury, I promise to visit you... just to ask what you find the more challenging: taking care of two grandchildren or of a whole team of Ph.D. students?

I wish you the very best for the years to come, and do not hesitate to come to Auvergne if you can find the time: there is great birdwatching (or so I've been told...), and the 2CV car is still there (we do not drive it too often, as it runs on leaded "super" gasoline that cannot be found anywhere these days... but it's fun!)

Cheers,

Anne Viallefont

## Appendix C: Giacomo Tavecchia





Esporles, 30 of February 2014

To whom it may concern (if any),

I met Byron during his visit to my lab at the CNRS of Montpellier in 2000. Back then, he was already showing some interest in numerical ecology and statistics. Somehow he worked on these skills and by the end of the same year he was already able to read my PhD thesis. Or at least part of it.

I met him again in 2001 in Canterbury in a rather original office, with a floor made of printed manuscripts and books. There he worked jointly with a young researcher from Australia, Ted 'Kelly' Catchpole, a bushranger who worked few years on some statistical issues of no importance.

In the year 2002 Byron joined some underground research groups (Photo 1- 2) and began, God knows why, to study sheep and deer (Photo 3 - 4).

This marked a difficult period in Byron's life when he passed more time running than computing. (None of his friends and colleagues knew what he was running away from).Life was not easy at that time. I remember one day, on the remote island of Rum, Byron was explaining me the importance of a no-potatoes/no-banana regime unaware that for dinner we would have jacket potatoes and bananas. It was also during this difficult period when Byron visited a shearwater colony and even considered to become Bayesian. Despite these difficulties, Byron went back on the right track and focussed his effort on useful issues such as stochastic modelling and strawberry branching, becoming a leader in USSC (Unexpected and Unshaped Strawberry Cakes). In 2005 he proposed the creation of the National Centre for Statistical Ecology, a virtual Institute made by real researchers who use virtual models to create real manuscripts on virtual topics. Despite the fact that nobody knew what the meaning of all this was, the project was funded and the virtual NCSE was really created.

In these fourteen years since I first met Byron, he acquired familiarity with the mildly complex issues of statistics. He has showed at least three times to be able to run a project with skills and independence. I have also seen him mastering an ink printer, correctly articulating phrases while walking and launching the software MATLAB. He is highly capable to work in a team (if only the other members allowed him to join the group).

I am firmly supporting Byron's application and I am sure he will be able to carry out this new project with success.

Sincerely, Giacomo Tavecchia





Photo 2. left: Byron at the island of Rum, proving his famous conjecture on the survival probability of deer living up side down .





Photo 1. Byron Morgan (first from the right, last from the left, second right from the middle) at Canterbury with the bushranger Ted 'Kelly' Catchpole (second from the left, third from the right, first left from the middle) and other suspicious members of the 'Calzone' underground group.



Photo 3. Byron conspiring with other researchers in a hidden hut.

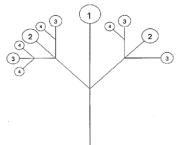
Photo 4. Byron taking measures to build a new road. It was during this difficult period that he even though to become a Bayesian.



...... ........ ......... Byron, Thanks for your thanks for believing insightful and patient in us, for giving us suidance during our the opportunity to PhD research and start our research also for all your career, and for your advice after that en couragement all along! We really enjoy our refreshing chats about birds, mice Byron = butterflies and and always inspirational other wildlife! caring for students but a real danger in We have in you a the garden! mentor, collaborator and friend. Please Koep in touch !!

APPENDIX D: GURUTZETA GUILLERA-ARROITA AND JOSE LAHOZ-MONFORT

I first remember being taught by you in my third year of my undergraduate degree at Kent. Apart from hearing about your son's love of yoyos (which dates it as Leo is now grown up), applied stochastic modelling was the course that inspired me to want to work in applied statistics.



From September 1999 to December 2002 you supervised (with Martin Ridout) my PHD on 'Stochastic Branching Processes in Biology'. Since then I have never been able to look at a strawberry without wondering about its branching structure nor hear about mad cow disease without thinking of prions in yeast cells. I then went on to work as a post doc on a grant you, Martin and Mick Tuite obtained continuing work on yeast prions making poor Lee Byrne count lots and lots of colonies of yeast cells. Sorry I was the post doc who took two lots of maternity leave on one grant!

Branching structure of a strawberry inflorescence.



Yeast cell colonies. Red are psiwith no prions and white are PSI+ containing at least one prion.

In 2007 I changed from Biology to Ecology working on your NCSE project on parameter redundancy. Since then I have been kept very busy looking at parameter redundancy in



Still from time-lapse experiments following yeast cells under a microscope.



Thought Maple code for sludge was prettier than a picture!

You have had a huge influence on my whole career and I would not be a senior lecturer today without all your help, ideas and support. Please don't ever retire completely!

Thank you Diana

anything from ring-recovery

models to models for sludge!

#### Byronmetrics, July 2014

## APPENDIX F: RACHEL MCCREA



Where to start Byron...I guess this is a little like writing a book (in fact I am actually writing this instead of working on our book...) that you aim for some kind of structure and hope that the words will fall into place.



I first met you in the capacity of lecturer of the MSc in Statistics module "Ecological Statistics", I attended all of those lectures, and yet didn't attempt a single statistical ecology exam question...we won't question too much about what that actually means... In that same year you also taught me computational statistics and it is there that you really caught my imagination and I saw what I wanted to do with my life. (James might also see this as the turning point at which his future wife lost the plot...) My aim was



to become as passionate about statistics as you are. I think you can pride yourself on being as good a lecturer as Feynman was, if not better, and certainly as chaotic. Our entire MSc class looked forward to your lectures.

My PhD flew by, through reams of MATLAB code, LaTeX error messages and detached past participles. I appreciated every hour that you spent talking about research as well as discussing the



occasional mole. You never once hinted at looking at your watch questioning when on earth will this student shut up and let me get on with my own work, and even when you were busy with a million and one things you always made time for me. Publishing our papers has never been particularly straightforward. Particular mention should go

to all the effort you put into getting our score test paper into Biometrics (I think that one paper shaped my success in the subsequent years). You never know, maybe I will get another paper into Biometrics before I retire!

I think nothing fills a student (or probably supervisor) with more dread than a dreary evening stuck in a foreign city and only their supervisor to dine with...or at least that was my impression before a very fun evening out in Montpellier with you. I know we drank far too much wine (but I did let you into my secret of ordering the cheapest+1 bottle of wine, a trick which I maintain to this day...and one which I will be implementing in Montpellier and Florence this summer) but I can honestly say it

was one of my most fun evenings out of all time. I still have a sketchy memory of all we spoke about; I hope that you do too!

It seems again that my other very memorable moment with you was also in Montpellier when we took our walk to the coast. Why did we take a trip to Montpellier in November when we



were off to Brazil in the December? Why was it so hot in Montpellier in November? How could you even walk the next day?



You've hopefully seen me change over the years. I was really impressed when you agreed to come to our wedding, knowing how much you hate such social engagements. I hope the champagne and wine made up for



having to wear a new suit.

When I got the e-mail saying I had been successful in getting the NERC fellowship I literally sprinted up to your office to tell you. I was pleased for myself but also that the faith, motivation and enthusiasm that you had in me had paid off.



My care-free, live happy, "yes to everything and every trip" attitude had to change in 2012 when we found out we were expecting the twins. The support that you and Janet gave James and me throughout the pregnancy was incredible. I was amazed that

after every scan (at least one every fortnight) you managed to show enthusiasm as I shared fuzzy

photos of twin 1 and twin 2. Your genuine "parental" concern for me to get to Cambridge as soon as possible was also appreciated (although this might have just been the fear that my waters would break in your office), and we made it there with a whole 2 days to spare before I was admitted to hospital.





I was even more amazed when you came to the christening (even if you did detour to see a penduline tit!). It is down to you that I actually missed work during my maternity leave and why I was so keen to return full-time in September 2012 (nothing at all to do with the need for adult conversation and to get someone else changing Sarah and Emma's nappies).

When I returned to work I had no confidence in my ability – I was worried my brain had been forever pickled from having children. I wouldn't say that I am back to 100% pre-pregnancy stress but I think I will get there eventually (maybe at the time that I decide that I want another 8 children...)



Every day in work with you has been full of laughter. It is a real shock to the system when you are not in the department as it somehow feels like something is

missing. I will always try to follow your mottos of academic life. I find myself saying things to PhD students and then realising that it was what you told me 10 years ago, and have a little chuckle to myself. You have come out with some classic quotes over the years but a recent favourite of mine was the statement that "dedicating a book to someone is like having sex in public" – I will now never

be able to dedicate any future books, or if I do I'll have to be incredibly careful who I dedicate them to!

I hope that we will continue to work together for many years to come. There will reach a point when Janet finally puts her foot down and insists that you "properly" retire, but when that time comes it will be a great loss to many of us. Thanks for everything Byron.



PS - Maybe we should write another book....

