Welcome to this, the 51st issue of the NZSA newsletter. My apologies for the delay, but had there been an issue in January it wouldn’t have needed stapling together! I guess that a good number of our members were frantic with exam marking and end of year preparations at the time of the submission deadline.

Talking about frantic, David Scott is at this moment tackling the challenge of being a brand new acting HOD here at U. of Auckland. He sends his best wishes for the new millennium to everyone.

The timing of this issue enabled the inclusion of reports on the SEEM 3 conference in Dunedin and the Regional Biometrics conference in Hobart, both held in December last year. Thanks to Rachel Fewster and Alain Vandal for these.

Moreover, we can take pride in four recent awards to members. These are George Seber (see p. 3), James Curran (p. 3), Shayle Searle (p. 5) and David Vere-Jones (p. 6).

Also, we report on the launching of *A History of Statistics in New Zealand* by Stan Roberts. Sadly, Stan passed away in February this year.

Please note that the next issue is scheduled for September, with a submission deadline of 31 July.

*Russell Millar*

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**Conference reports**

**SEEM 3, Dunedin**

The third conference on Statistics in Ecology and Environmental Monitoring was held in Dunedin from 6-10 December 1999.

About one hundred statisticians and biologists attended, mostly from New Zealand and Australia, although some came from as far afield as Asia, the US, Canada and Europe. The aim of the conference was “to mark and recapture the contribution of Professor George Seber to Statistical Ecology”, and this was accomplished with a fitting tribute to George’s distinguished career by Ken Pollock of North Carolina State University. It was clear that George’s 1972 book, *The Estimation of Animal Abundance and Related Parameters*, is still regarded as the bible of statistical ecology, although one speaker had found a more innovative use for it as a head-rest for sleeping in the library! Always ready with helpful suggestions, George recommended trying the second edition which is thicker.

Despite the warnings of the organizing committee, most of the participants were unprepared for the chilly Otago weather. Fortunately, the Dunedin Kathmandu store was having a sale of arctic gear, so the shop became a popular evening haunt for attendees.

Speakers were soon having to prove their hardiness in other ways, however, and the search was on to find the person who had tagged the most vicious animal after ecologists described their close encounters with a variety of ferocious carnivores, rodents and songbirds. Initially it seemed that Steve Amstrup of the US Geological Survey was in the lead, with his high-risk radio-tagging of Alaskan polar bears. Nonetheless, it always pays to be sure and, after getting married just before the conference dinner, Steve and his new wife Virginia allegedly spent the evening testing their muscles against the little blue penguins of the Otago Peninsula.

We would like to think of the conference as a “thank you” rather than a “goodbye” to Professor George Seber and at the conference dinner he was...
presented with an engraved pen in the hope that it might assist him to write yet more books for us all! Thanks also go to Richard Barker, David Fletcher, Irene Goodwin, Bryan Manly, and Brian Niven of the University of Otago for their outstanding organization and smooth running of the conference. We hope the intrepid ecologists survive to keep the statisticians busy until the next SEEM meeting.

Rachel Fewster

Regional Biometrics 99, Hobart

The Australasian Region of the International Biometrics Society celebrated the 50th anniversary of its formation in 1999, and held its Biennial Conference, Biometrics 99, to mark the event. The conference took place in Hobart, at the University of Tasmania, from December 12-16, 1999. A total of 152 participants were registered, 39 from New Zealand. Three satellite workshops were held during the same period, on group sequential trials, analysis of correlated data using REML and non-standard mixture analysis for environmental data.

Biometrics 99’s major themes were Human and Plant Genetics, and the Analysis of Spatio-Temporal Data. These themes were supported by quality invited papers delivered by Gary A. Churchill (The Jackson Laboratory) and Patrick Heagerty (U. Washington). Churchill proposed the use of regression techniques to assist in the task of mapping genotype to phenotype, by considering the masking or uncovering of the effects of one allele by another as an interaction term in a regression model of phenotype against gene loci. Heagerty presented a review of regression models for spatial binary data with a view to forecasting.

Other themes of the conference were Design of Experiments and Biomedical Studies. Peter Johnstone of AgResearch put a strongly worded case for the closer involvement of statisticians in the planning of comparative experiments, citing the overwhelming direct and opportunity costs of poor planning. John Neuhaus (UCSD), a frequent visitor to Australasia, discussed elegant properties of GLMs by which one can cater to misclassified clustered and longitudinal data. Scott Emerson (U.Washington) presented a framework for adaptive clinical trial design, in keeping with the satellite workshop he co-organized with John Kittelson (U. Otago).

The contributed sessions were especially numerous in the main themes of Genetics and of Spatial and Longitudinal data, strongly motivated by application to such incomparably named Australian lifeforms as Gympie Messmates and Noisy Friarbirds. Many of us were saddened by the announcement of the impending dissolution of the Department of Statistics at the University of Adelaide that prefaced Ari Verbyla’s presentation. Thirteen contributed sessions were given by New Zealand researchers. The prize for best student talk was shared ex aequo by Melissa Dobbie (ANU) for her talk on “Modelling longitudinal zero-inflated count data” and by Olivier Thas (U. Gent, Belgium) for his talk on “Spatio-temporal modelling for intervention analysis in river monitoring networks”.

Anecdotal evidence from the conference suggests that presentation software will soon overtake overhead slides as a preferred presentation medium, much as slides have all but buried chalk and blackboard. The use of this technology was greatly eased both by the versatile installations and the constant presence and supervision of a technician. Organisers should be commended for a very smooth running of the presentation schedule. Presenters and chairs were equally competent: Australasian Region President Ken Russell found no occasion to mete out the “presidential black marks” with which wanting performances were threatened at the conference outset.

A well-stocked, at times spontaneous, social calendar supplemented the conference schedule. It was very slightly overshadowed by some communication breakdowns partly due to the lack of an information board, of email facilities and of real coffee. The conference dinner at the Royal Yacht Club of Tasmania was a very enjoyable experience which extended well into the night, especially for those who chose to cruise the Derwent River for a nightcap and a turn on the dance floor.

The next 50 years will be greeted by the International Biometric Conference IBC2000 in Berkeley, California. The Australasian Region Biennial Conference should reconvene in 2001, in the midst of the vitality, maturity and continuity so well detailed by outgoing IBS president Susan R. Wilson (ANU) during her golden jubilee address at Biometrics 99.

The Biometrics 99 Web site sports the details of the organising and program committees, as well as photographs of the conference. It is located at URL http://www.cmis.csiro.au/biometrics99/.
Hector medal for George Seber

The Hector Medal in Mathematical and Information Sciences, announced at the Royal Society’s Annual General Meeting of Fellows held in Auckland last year, was awarded to Professor George A. F. Seber. Hector medals are awarded to people who, working in New Zealand, have undertaken research of great merit and have made an outstanding contribution to their particular area of science.

The Hector Medal is the premier scientific award in New Zealand and is awarded each year by the Royal Society of New Zealand. George’s award recognises his enormous contribution to Statistics through his research, writing and teaching career spanning 40 years. We offer George our warmest congratulations on this great honour. The medal is awarded to a mathematical/information scientist every three years.

Now that I have your attention......the NZSA is looking for a new treasurer to replace Philippa Graham.

Philippa tells me that the job is not onerous now that Harold has taken over the membership side. There are no GST complications, as we are not registered for GST.

PS. Thanks for a job well done Philippa.

Quote of the Day (5 Feb 2000)

“The boats are very close (in performance) and we went into the race today with two races to go, expecting to win one each, and Prada won today. So, it looks good for us tomorrow.”

Paul Cayard

Note: As you already know, America One lost again to Prada the next day, giving the Louis Vuitton Cup to the Italians.

Ed.

The humorous side

Top 10 reasons to become a statistician

• Deviation is considered normal
• We are mean lovers
• We do it discretely and continuously
• We are right 95% of the time
• It is OK to comment on someone’s posterior
• We may not be normal, but we are transformable
• We never have to say we are certain
• We feel complete and sufficient
• We are honestly significantly different
• No one wants our jobs
• We don’t need to be exact

Waikato boy does good

James Curran has been awarded the Joint Presidents Award of the UK and USA Forensic Science Societies for the best paper by a young researcher in 1998-99.
New Zealand Statistical Assoc.
51st Annual Conference
1 September 2000

The theme for this one day conference is Statistical Applications to Economics and Medicine. Papers in other areas of statistics are also welcome.

Please submit your registration by July 1st, 2000. Registrations later than this will be accepted, but we cannot guarantee meeting all of your requirements. The registration fee is $90 with a late fee of $10 if not paid before June 1st.

Abstracts are due by July 1st.
Further information may be found at
http://www.math.canterbury.ac.nz/nzsc.shtml

15th Australian Stats Conference
Adelaide, Australia
3-7 July 2000

We would love to see a strong contingent of New Zealanders at our next Australian Statistical Conference. The conference will be held at the Adelaide Hilton International Hotel in the very heart of the city of Adelaide. We hope that the following information will encourage you to attend.

The major themes of the conference include Large and Complex Datasets (July 3-4), Medical and Pharmaceutical Statistics (July 6-7), Survey Sampling (July 6), Industrial Statistics, Bayesian Statistics, Stochastic Modelling, and Statistical Consulting.

Invited speakers are Adrian Baddeley, Mark Berliner, Bruce Brown, Dennis Cook, Jerome Friedman, Thong Ngee Goh, Kerrie Mengersen, David Moore, Donald Rubin, Bimal Sinha and Peter Thomson.

Workshops on Statistical Education, Statistical Methods for Data Mining and Survival Analysis will be held on the weekends immediately before and after the conference for an additional fee. A workshop on Statistical Consulting will be held on the Wednesday.

For further information please contact:
SAPMEA Conventions
68 Greenhill Road
WAYVILLE SA 5034
Ph: +61 8 8274 6060
Fax: +61 8 8274 6000
Email: 15ASC@sapmea.asn.au
Web: http://www.sapmea.asn.au/15ASC.htm

Come and join us!

Richard Jarrett, CSIRO
Chair, Conference Committee

Slice of Statistics

Many thanks to Ian Westbrooke for our slice for this issue. Ian recently took up the job of statistician for DOC, Christchurch.

I’ve been at the NZ Department of Conservation (DOC) for just over a week now. DOC manages all of the NZ government’s conservation land, including national parks, forest parks, and lots of reserves; plus marine reserves, most offshore islands (from the Kermadecs to the north to the sub-antarctic islands like Auckland Islands), making up about a third of NZ’s land area. Also, DOC is responsible for protecting threatened and endangered species (such as kiwi, tuatara, NZ sea lion, Hector’s dolphin) and ecosystems.

DOC has about 50 staff in a national Science and Research Unit, with other scientists and staff with science backgrounds elsewhere in the organisation. It also commissions and collaborates on scientific research with other organisations, especially with Landcare Research, one of the government’s Crown Research Institutes.

Until now, DOC has not had a statistician position in the science unit. Last year, it decided to establish a 2 year position, available in either Hamilton or Christchurch, and I was lucky enough to be appointed. Timing turned out to be particularly fortuitous, as shortly after my appointment to DOC, a new government was elected and pledged to abolish the Health Funding Authority where I had been working.

So far, I’ve been getting oriented - including a 3 day trip to Nelson Lakes National Park, to look at a major eco-system recovery project there. Next week, I’m off to Sydney for a four-day course on graphing data, mainly in Splus. But after that I expect I’ll be in the office a lot more, although I expect to gradually get around many of the areas DOC is involved in. Plus I’ll be learning SPSS from scratch as it has recently been chosen as DOC’s statistical package.

I look forward to hearing from everyone and please feel to free to pass on my email address if anyone needs it.

Ian Westbrooke
Statistician, Science and Research Unit
Department of Conservation
Private Bag 4715, Christchurch
email: iwestbrooke@doc.govt.nz
Honorary Fellowship of the Royal Society of New Zealand for Shayle Searle

At its meeting in Auckland last year the Academy Council of the Royal Society of New Zealand conferred Honorary Fellowship on Shayle Searle, (Professor Emeritus of Statistics, Cornell University, Ithaca, New York, USA).

Honorary Fellowships are conferred on scientists, research engineers and technologists living overseas for eminence in their scientific or technological field and their association with New Zealand.

The following material is an excerpt from the statement in support of nomination that was prepared by Harold Henderson.

Statement of Nomination (abridged)

Professor Searle is a world leader in the demanding field of linear and mixed models in statistics. He is Professor Emeritus of Biological Statistics in the Departments of Biometrics and Statistics, Cornell University.

Professor Searle’s early and continuing interests in translating applied problems into solvable mathematical and statistical ones has been arguably his greatest contribution to the field. This has taken the form of a series of six Wiley text books (including the seminal *Linear Models* of 1971, now in the Wiley Classic Series, and still selling well), more than 130 research articles, and his contributions to the theory of statistical computing in linear and related models. In short, he has made a career out of proving that “applied mathematical statistics” is, in fact, not an oxymoron, but a valuable subfield of statistics.

As an expatriate New Zealander, Professor Searle has maintained a strong and ongoing connection with New Zealand. He was born in New Zealand, and gained his M.A. with first class honours in mathematics from the University of New Zealand in 1949. After two years in an actuary’s office he went to Cambridge University where he earned his Diploma in Mathematical Statistics.

Shayle was at Cambridge in its statistical heyday, studying with early luminaries of statistics including Sir David Cox, Frank Anscombe, John Wishart, and his tutor, Dennis Lindley. He returned to New Zealand in 1953 as Research Statistician with the Herd Improvement Department of the New Zealand Dairy Board. While there, Professor Charles Henderson from Cornell University came and spent a sabbatical leave in Shayle’s office. Following that, Shayle won a Fulbright travel award to Cornell in 1956 where he got a Ph.D. in Animal Breeding in 1959 with a very strong minor in Statistics, under the direction of Henderson, who was a very statistical animal breeder. Thus began a lifetime of exchanges between the two, which became mutually beneficial to both statistics and animal breeding. Professor Searle’s latest book, published in 1998, *A Mathematical Supplement to C.R. Henderson’s ‘Applications of Linear Models in Animal Breeding’* is testament to this.

In 1962, Shayle was invited back to Cornell from New Zealand, first to be in the computing center and later as a faculty member in the Biometrics Unit. He has remained in there ever since as Professor of Biological Statistics, except for being visiting Professor at Texas A&M University, Florida State University, Universität Augsburg and the University of Auckland.

Professor Searle’s contributions in statistics are largely in the areas that he has entitled three of his books; *Matrix Algebra useful for Statistics; Linear Models for Unbalanced Data and Variance Components*. His earlier books were *Matrix Algebra for the Biological Sciences (including Applications in Statistics)* and *Matrix Algebra for Business and Economics*.

In addition to research, teaching, other faculty duties and writing books Professor Searle has served his profession, holding the following positions: Associate Editor for *Biometrics*; member of the Regional Advisory Board and Regional Committee for the Biometric Society (ENAR); member of the Council of Biometric Society (International); and Editorial Board of the Biometric Society (International). Professor Searle was Director of the Statistics Center at Cornell for two years.

Professor Searle also has an adventurous nature and often advised “try something and something good may happen”. In some ways, this attribute characterised his work, because he addressed many unique problems, as is apparent from his publications. A primary indication of Professor Searle’s work is the 165 (at last count) invited papers he has presented.

Since his retirement he has been spending the summer in New Zealand writing. He has two more books in preparation with Cornell University colleagues, *Matrix Algebra for Applied Economics* with Econometrician Professor Lois Schertz Willet and *Linear and Generalized Linear Models* with Statistician Professor Charles McCulloch.
New Zealand Science and Technology Gold Medal awarded to David Vere-Jones

Professor David Vere-Jones
Professor of Statistics
School of Mathematical and Computing Sciences
Victoria University of Wellington
and
Director
Statistics Research Associates Limited

The Gold Medal to David Vere-Jones was awarded for outstanding and fundamental contributions to research and education in probability, statistics and the mathematical sciences, and for services to the statistical and mathematical communities, both within New Zealand and internationally.

The New Zealand Science and Technology awards are administered by the Royal Society of New Zealand and were initiated by the Government in 1990. The inaugural Gold Medal was awarded to Vaughan Jones.

The following material is an excerpt from the statement in support of nomination by the NZSA and NZMS that was prepared by Harold Henderson, Peter Thomson, Robert Davies and Graeme Wake.

Statement of Nomination (abridged)
During the course of his long and distinguished career, Professor David Vere-Jones has made outstanding and fundamental research contributions in probability, statistics and the mathematical sciences in general. These influential contributions are characterised by their clarity, depth and insight, and have typically led to important new research developments. An example of the latter is his path-breaking work on earthquake modeling which is at the forefront of current international research in the area. He has also made important and far-reaching contributions to the directions of statistical and mathematical education both in New Zealand and internationally. The hallmarks of the man and his work are his clarity of vision, his strong sense of purpose and his concern to help the local mathematical communities better realize their potential for the nation.

Professor Vere-Jones is New Zealand’s leading resident mathematical statistician. He has made major contributions to the theory of statistics, its applications and to the teaching of statistics and mathematics in New Zealand. He is highly regarded internationally as significantly advancing understanding of mathematics and statistics and is involved in numerous international activities. His international standing is such that he is frequently invited to overseas institutions and conferences. He speaks Russian and other languages thus enabling him to maintain frequent contact with statisticians and seismologists in many countries. He has about 100 refereed publications.

He has received numerous honours and distinctions. In 1995 he was awarded the International Statistical Institute Henri Willem Methorst Medal. In 1982 he was elected as a Fellow of the Royal Society of New Zealand. He has been an ordinary elected member of the International Statistical Institute since 1978 and a Fellow of the Royal Statistical Society since 1969.

RESEARCH
His research areas have been concerned with Point Processes (the statistical theory of sequences of events that occur at discrete points in time or space, such as earthquakes, neuron firings, volcanic eruptions, etc.) and Markov Processes (including branching processes and queuing theory). A substantial body of theory owes its origins to him, either directly or via his students. Of particular importance and relevance to New Zealand is his pioneering work on the applications of point process theory to seismology. This began with the two papers on the times of occurrence of New Zealand earthquakes in the N.Z. Journal of Geology and Geophysics and is now expanded to include spatial patterns, earthquake mechanisms and the statistical problems associated with earthquake risk estimation and earthquake prediction. He received the International Journal of Forecasting Prize in 1997 for the best article in the preceding 5 years for his 1995 paper “Forecasting earthquakes and earthquake risk”.

CONTRIBUTIONS TO EDUCATION
He has also made substantial contributions to mathematical and statistical education in New Zealand. He was the Subject Convenor for Mathematics for the University Entrance Board of the University Grants Committee (1978-85) and chaired the Education Committee in the Royal Society of New Zealand (1987-90). He was instrumental in setting up Victoria University’s Institute of Statistics and Operations Research, in 1975, which promoted and coordinated research, teaching and consulting in Statistics and Operations Research at Victoria University.
PROFESSIONAL ASSOCIATIONS

Professor Vere-Jones is a former president of the NZ Statistical Association (1981-83) and a former president of the NZ Mathematical Society (1974) which he helped found. He was Chairman (in the 1980’s) of the East Asian and Pacific Regional Committee of the Bernoulli Society (a branch of the International Statistical Institute). He was Interim President (1991-92) of the International Association for Statistical Education, which took over the role of the International Statistical Institute Education Committee which he chaired from 1987-91. He was also a key member of a team responsible for writing a major review of the mathematical sciences in New Zealand.

A SHORT HISTORY

David was born in London but came to New Zealand at the age of twelve, completed his secondary education at Hutt Valley High School (was dux in 1953) and was a student at Victoria University of Wellington in the middle fifties. He won a Rhodes scholarship to undertake postgraduate studies in probability theory at Oxford under the supervision of Professor D.G. Kendall. After completing his doctorate he went to Moscow as an exchange Scholar at Moscow University where he made contact with the strong Russian school on probability, contacts which have continued over the years. His two papers on non-negative matrices, although developed as part of Markov chain theory, are relevant to areas of mathematics quite unrelated to statistics. David returned, as so many ex-Victoria students in mathematics have done, to Wellington in 1962 and took up the post (which he held previously before going to Oxford in 1958) at the Applied Mathematics Laboratory of D.S.I.R. which he held until the mid sixties. During this time he married his wife Mary who was then also working in the Applied Mathematics Laboratory. After short appointments in distinguished statistical centres such as the Australian National University in Canberra, Michigan State University and Manchester University, the call to Wellington was again answered by his appointment, in 1970, to the chair of mathematics at Victoria University recently vacated by the retirement of his former teacher (Professor J.T. Campbell). Under David’s leadership, the group in statistics and operations research built up a strong national and international reputation in research, teaching and consulting. His leadership skills, clarity of mind and willingness to help the University in all its other endeavours earned him wide-spread respect within the University and outside.

“A History of Statistics” by H. S. (Stanley) Roberts

A History of Statistics in New Zealand was launched by the New Zealand Statistical Association at Statistics New Zealand’s Wellington office on the evening of 22 November 1999.

A handshake between Len Cook and Stanley marked the official launch of the book, and then Stanley spoke briefly to thank contributors.

About 40 people attended and the 11th floor conference room was full of animated statisticians engaged in deep conversation with one another. The launch of the history was, of course, the perfect excuse for much reminiscing.

The launch was a very happy event, marking the culmination of a significant amount of work by Stanley over the last three years. The onset of Stanley’s illness in the middle of 1999 had delayed the intended date of publication of the book, but nonetheless he managed to attend the NZSA’s 1999 Jubilee Conference and to speak there as a key part of the history theme of the conference.

The NZSA deeply appreciates the huge donation of time and effort that Stanley has contributed to us by his work on A History of Statistics and the support offered to him in this endeavour by his wife Gillian Roberts.

Both Sharleen Forbes (the previous NZSA President) and Len Cook (the Government Statistician)
spoke enthusiastically about the significant contribution that *A History of Statistics* makes to statistics in New Zealand. An important factor in tackling the future is an understanding of the past, and much of our knowledge about the past was in danger of being lost to future generations of New Zealand statisticians.

The book is a fascinating and varied account of many different aspects of the history of statistics in New Zealand. Stanley felt strongly the importance of retaining the different voices of contributors and this characteristic of the book adds to its appeal. There’s been much positive feedback received so far - Geoff Jowett commented that the book ‘filled in many gaps’ for him. Gillian Roberts says that even members of her orchestra are finding it a good bedtime read (we are assured that this is because of its entertainment value, rather than any soporific effects!).

Complimentary copies of the book have been sent to members of the NZSA, attendees of the 1999 Jubilee Conference, contributors and libraries. Further copies of the book can be obtained for $39.95 by writing to the NZSA Secretary, PO Box 1731, Wellington.

*Frances Krsinich*

**News Flash**

The New Zealand Government Statistician, Len Cook, will be leaving the NZ Public Service in May to take up the position as the UK National Statistician and Director of the UK Office for National Statistics.

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**Obituary:**

**H. Stanley Roberts - 1920-2000**

Stan Roberts died on 9 February at the Mary Potter Hospice in Wellington. He was 79.

Stan was a great believer in professional societies and had a lot to do with the early success of the NZSA as a tireless secretary during the critical days 40 years ago as the association passed from the excitement of its establishment into an ongoing organization. We have a lot to thank him for as he made sure new members were recruited and that there were annual conferences to maintain their interest. He constantly looked for ways to raise the profile of Statistics. He was the first person in the Association to suggest we should be into publications and *Statistics at Work* came about as a result of that encouragement.

Stan will also be remembered for his work at AMD (Applied Mathematics Division, DSIR) including bringing mathematical and statistical analysis into non-traditional areas such as the Library Service. For many years he taught part of the library training course, introducing statistical thinking. Even after he retired from AMD he continued to bring mathematical thinking to the world by teaching at high schools for a number of years. His approach was always eminently practical so that his pupils and clients alike could see it was worth their while taking care to check numerical information and to heed the signals their analysis sent.

All his life Stan had a great love of music. He learnt the viola as an adult and played in the Wellington Chamber Orchestra. He started the tradition of madrigal singing at AMD.

Another abiding interest was history. Stan was determined to finish *A History of Statistics in New Zealand* and managed to complete it before his health finally declined. After that he felt his work was done.

*Jean Thompson*

Stan’s funeral was held at the Wellington Cathedral on Monday 14th February.

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**Submissions to the Newsletter**

The Newsletter welcomes any submissions of interest to members of the New Zealand Statistical Association. News about New Zealand statisticians, statistical organisations, statistics in education, or statistical curiosities are suitable for inclusion. Letters that raise issues of importance to statistics in New Zealand are also welcomed. Photographs of past and present statisticians and statistical gatherings are of particular interest. All photos will be copied, added to the NZSA photographic archives, and returned.

**Advertising In the Newsletter**

The Newsletter accepts advertising of interest to statisticians in New Zealand. Advertising is placed subject to space considerations. Personal advertising by NZSA members will be published free. Other advertising is $250 per page, $140 per half page, and $75 per quarter page. Other sizes can be quoted on request. All advertising requests should be directed to the editor.
W.N. Venables, B.D. Ripley

Modern Applied Statistics with S-PLUS

Throughout, the emphasis is on presenting practical problems and full analyses of real data sets. Many of the methods discussed are state of the art approaches to topics such as linear, non-linear, and smoothing regression models, tree-based methods, multivariate analysis and pattern recognition, survival analysis, time series and spatial statistics. Throughout modern techniques such as robust methods, non-parametric smoothing and boosting are used where appropriate.

This third edition is intended for users of S-PLUS 4.9, 5.0 or later, although S-PLUS 3.3/4 are also considered. The major change from the second edition is coverage of the current versions of S-PLUS. The material has been extensively rewritten using new examples and the latest computationally-intensive methods.

Hardcover. 978-3-540-98585-1
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C.P. Robert, G. Casella

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Until the advent of powerful and accessible computing methods, the experimenter was often confronted with a difficult choice. Either describing an accurate model of a phenomenon, which would usually preclude the computation of explicit answers, or choosing a standard model which would allow this computation, but may not be a close representation of a realistic model. This dilemma is present in many branches of statistical applications, for example in electrical engineering, aeronautics, biology, networks, and astrometry. Markov chain Monte Carlo methods have been developed to provide realistic models.

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V.N. Vapnik

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1999. CD-ROM, handbook with approx. 550 pp. (DM 268.24 incl. 16% VAT)
DM 214.11, USD 175.39 / EUR 265.10
(plus local VAT)
ISBN 3-540-19815-2

System requirements: Pentium processor with 32 MB of memory, Microsoft Windows 95/98 or Windows NT 4 or higher, MacOS 8.5, or other Windows-compatible graphics card and mouse; CD-ROM drive (IBM-compatible systems only)

R. Shumway, D.S. Stoffer

Time Series Analysis and Its Applications

Hardcover. 978-0-387-98609-2
University of Auckland

Don McLeish, Cynthia Struthers and their 7-year-old son William have arrived from the University of Waterloo in Canada and will be with us for about 9 months. (A 15-year-old daughter will follow in due course.) They are in James Reilly’s place for about 10 days and for the balance of their stay will be in Robert Gentleman’s house. (Robert, by the way, was back in Auckland for the 2 weeks from Sept 16).

Don has a background in probability with more recent interests in statistical inference via estimating functions and related Hilbert space and projection methods (2 books with Chris Small), Monte Carlo Methods, and Statistical Models for Financial Data. He will teach a masters course on Monte Carlo/Finance in the 1st Semester of next year.

Cyntha is a biostatistician and ace teacher who has declined to teach for us because she wants to use her time to concentrate on her research. Cyntha has been heavily involved in women’s issues (e.g. being president of women’s caucus) in the Statistical Society of Canada and in the American Statistical Association.

We extend a warm welcome to Dr Marti Anderson who has taken up a lectureship in the department. She is currently in Rm 218. Marti comes from an ecological background and is keen to continue this research in NZ and to establish close ties with the Leigh Marine Lab.

We were given the use of 14 offices in Building 723, and staff in Building 731 were relocated to the new building in mid December. We have also located part of our PhD program in the new building - those students supervised by Tamaki staff, which now includes Alastair Scott and Chris Triggs.

The department had 100% success in the latest promotion round: Brian to AP, Russell to SL over the bar (SLOB!), and Maxine and Renate to SL.

Russell Millar

Biostatistics Workshop on Applied Survival Methodology, December 3-5, 1999

The Clinical Trials Research Unit (CTRU) and the Department of Statistics of the University of Auckland, supported by the Health Research Council of New Zealand and SAS Institute New Zealand, organised a workshop on Applied Survival Methodology. The workshop was held on December 3-5 1999 at the University of Auckland, and was attended by 59 participants from New Zealand and Australia.

Invited speakers were Professor John D. (Jack) Kalbfleisch (U. Waterloo), Professor Gilbert MacKenzie (Keele U.), Dr. Robert Gentleman (U. Auckland) and Dr. Alain C. Vandal (U. Auckland). Levelled at practising biostatisticians, the workshop covered topics ranging from basic nonparametric concepts such as censoring, log-rank tests and product-limit estimation of survival, to the more advanced concepts of proportional hazards models, stratification on baseline hazard, Cox regression, residuals, time-dependent covariates, frailty models and competing risks. The workshop involved practical sessions for all participants in a computer laboratory.

The workshop was followed by a half-day colloquium aimed at researchers in the field of survival analysis.

The very positive feedback received from the workshop’s participants, as well as the success of a similar workshop in 1998 on the Analysis of Longitudinal Data using Repeated Measures, have encouraged the organisers to seek funding for another applied workshop in 2000, based on a similar combination of lectures and applied computer work. The provisional topic for this workshop is Generalised Linear Models and Extensions, in accordance with the stated interests of the last workshop’s participants.

The workshop was organised by Dr. Derrick Bennett (CTRU), Ms. Joanna Broad (CTRU), Dr. Katrina Sharples (Preventive & Social Medicine, U. Otago) and Drs. Gentleman & Vandal (CTRU/Statistics).

CTRU URL: http://www.ctru.auckland.ac.nz/
Statistics URL: http://www.stat.auckland.ac.nz/

Alain Vandal
December 1999 saw a large contingent of Waikato statisticians heading across the ditch to attend Biometrics'99 in Hobart. Nye John, David Whitaker, Bill Bolstad, Lyn Hunt, Judi McWhirter and James Curran, together with honorary lecturer Harold Henderson (of AgResearch) all attended.

Nye John is due to return from sabbatical in the new year. In the latter part of his leave, he has been involved in the current review of the business office of the International Biometric Society. He also attended a Statistics Networking Forum held at Woollongong, Australia, in October. David Whitaker, who has been acting chairperson in Nye’s absence, is eagerly looking forward to his return.

The department welcomed James Curran early in September and also farewell our senior tutor, Sharon Gunn, in December. Sharon is returning to Melbourne. We congratulate James on his recent success in receiving an award from the Joint Presidents of the UK Forensic Science Society and the California Association of Criminalists. The award is made biannually to a young practitioner for a significant contribution to the field of forensic science. The award will enable James to attend the spring meeting of the associations in Napa, California, to give a talk.

Murray Jorgensen and Bill Bolstad are currently involved in a joint project with a group from the Computer Science Department, analysing internet traffic data. Bill will be on sabbatical in 2000. He plans to attend three conferences as part of his leave, the International Society of Bayesian Analysis conference in Crete, the Nordic Conference of Mathematical Statistics in Norway and finally the International Biometric Conference at Berkeley, California.

Upcoming visitors to the department include Dr Ken Russell, Associate Professor of Statistics at the University of Woollongong, Australia, who is due to visit the Department for approximately six weeks, from 2nd January until 13 February 2000. During his stay, Ken will be working with Nye John.

We are also being visited by Dr Dan Coster, Associate Head of Department for the Department of Mathematics & Statistics at Utah State University. He will be spending approximately six months with us, arriving in New Zealand just prior to Christmas and starting work in the New Year.

RECENT SEMINARS IN THE DEPARTMENT

Matthew Dalgety (BCMS(Hons) Student, University of Waikato) “Establishing a most probable range using existing Most Probable Number estimation techniques.”

Dr Murray Jorgensen (Department of Statistics, University of Waikato) “Minimum Message Length Inference for finite mixture models.”

Dr Henri Moolman (University of Zululand, Durban-Umlazi Campus) “A heuristic solution to the examination timetable problem.”

Dr Murray Jorgensen (Department of Statistics, University of Waikato) “Approaches to Model Selection in mixture model clustering and Bayesian Networks.”

Dr Chris Triggs (Department of Statistics, University of Auckland) “Some statistical problems in the interpretation of mixtures of DNA profiles.”

Dr Russell Millar (Department of Statistics, University of Auckland) “Bayesian nonlinear state space modeling and comparison of implementation in BUGS and ADMB.”

Judi McWhirter

In Murray’s pool after a hard day at the office.

Massey, Palmerston North

Looking back into the archives we find that there hasn’t been a Massey, PN update since January ‘99, so there is much updating to do. Since the last time of writing, four PN statisticians have been on academic leave overseas.

Mark Bebbington visited the University of Queensland in July to continue collaborative work with Dr P.K. Pollett on the stochastic modelling of earthquakes. He also presented a paper at the 15th Annual Conference of the Australian Society for Operations Research, staying at the ANA hotel on the Gold Coast (tough work, he says, but someone has to do it).

Also in Australia, Ganesalingam spent a total of five months visiting Griffith University, RMIT, Bond and the University of Queensland, renewing old research contacts and extending his work on the fitting of mixture models. Unfortunately his visit was interrupted by a case of severe eye strain brought on by heavy reading, and he had to come home briefly before returning to complete his work.

Continuing the Australia theme, Graham Wood presented a paper at the 43rd Australian Mathematical Society Conference in Melbourne in July, and attended the 6th Australian Optimization Day Mini-conference. He spent six weeks last year with TASEAP (the Thai Australia Science and Engineering Assistance Project), working with universities in Thailand on the initiation of continuous improvement programmes. A highlight was meeting up with his old colleagues at Khon Kaen University.
Victoria University

Last News from VUW/ISOR:
A personal report from Peter Smith.

I’m not sure when ISOR ceased to exist but I would guess that 1999 will be the last year with anything bearing the ISOR label. It’s hard to pin down exactly why ISOR has disappeared but the process has been painful to many people who hugely enjoyed working for ISOR and believed in the direction the Institute maintained. On a personal note, I arrived in Wellington in 1988 to a working environment which was more like a family than an academic department and managed to be more forward looking and conducive to research than any of the Departments I’d previously worked with.

So ...... what happened ? Well, I’m not the person to give an overview of ISOR as others have a better idea of its history. But there have been great changes recently so I should report these.

External Research and Education
For several years ISOR ran an external research and education programme the aims of which were to pick up consulting jobs with aspects of statistical research or education. The jobs were spread around the Institute and completely funded two extra academic staff. The extra staff gave us more research potential, more flexibility and more variety of work. After considerable battles to maintain this programme it eventually ground to a halt through administrative difficulties external to the Institute. Alistair Gray left us for the Department of Statistics after the closure of the programme and David Harte will depart for Statistics Research Associates at the end of 1999. Both David and Alistair were of immense value to the Institute, offering the flexibility to contribute to teaching, research and internal University consulting as well as the external programme. We wish them lots of success and hopefully fun in their new jobs.

Internal Consulting
For over a decade the University has run a statistical consulting Service for all staff, graduate students and researchers at the University. For much of this time the Service was run by ISOR and in recent years it has involved two academic statisticians and a Statistical Programmer. This Service has been a fatality of devolution of funding and general financial constraints and will cease at the end of 1999. Another key element to the Institute offering variety of work and the practice of Statistics was gone. Brian Dawkins ran the Service in 1999 and decided to take early retirement this July, with the catch phrase “going bush” ! Life here is less fun without Brian and I miss
being able to pick his brains on statistical computing and consulting matters. Hope you enjoy the “bush” Brian! For the remainder of the year Edith Hodgen (the Statistical Programmer) has run the Service single-handedly and done a great job. Well done Edith.

The Official Centre for Statistics
You’d think that with such financial problems and closures going on ISOR would not have any more ambitious ideas. But with David Vere-Jones and Peter Thomson around you keep trying. The proposed Centre had financial backing from Statistics New Zealand and very nearly came into existence until an apparent lack of University support caused it to fizzle out.

So, the ISOR that was always stretching the range of an academic department to include Centres, Consulting, Statistical Practice, Overseas Research Links, etc. was reined in to the more usual activities of teaching and research. As a result of this, perhaps, we have also had to face the early retirements of David Vere-Jones and Peter Thomson. Peter has already left to form Statistics Research Associates and David will join in 2000. What can I say but point out the obvious - David and Peter have been exceptional leaders and researchers. They have set enormously high standards and worked tirelessly for the good of the group. They have been great fun to work with and will be missed enormously! We hope they will enjoy the challenge and freedom of working for Statistics Research Associates.

And then there were three, so .... to the future and February 2000 will see the Statistics Group shrunk (briefly) to Megan Clark, Shirley Pledger and Peter Smith. Not for long though. Reinforcements are coming - read further for news from the Statistics and Operations Research Group at Wellington.

News from STORMCS
(The Statistics and Operations Research Group of the School of Mathematical and Computing Sciences)

Good news for next year - we have two new appointments: Saralees Nadarajah and Rustam Ibragimov have accepted positions in the School. From Nottingham and Michigan, respectively, we look forward to their arrivals in 2000. In addition the Chair in Statistics has also been advertised so we hope to jump from 3 to 6 statistics staff. Should be an exciting year!

Other recent events include Shirley Pledger gaining her Ph.D. with a thesis on Finite Mixtures in Capture-Recapture Models. Well done Shirley! She also spent a week on North Brother’s Island as Statistical Consultant to the team studying Duvaucel’s Geckos and has recently been awarded a research grant from the Strategic Development Fund at Victoria.

Ray Brownrigg and David Vere-Jones are currently in China continuing the long-running research link with Beijing in statistical seismology. Peter Smith is just back from research leave including stints at the University of Washington and AT&T Wireless Research Labs.

This year Victoria hosted the NZSA Annual Conference - David Harte and David Vere-Jones are to be congratulated for the smooth and efficient running of the Conference. Congratulations also to Megan Clark who will be visiting the UK next year supported by the British Council. Megan has also kindly taken on the role of Programme Director for the Statistics and Operations Research Group. Our thanks go to Tapas Sarkar (the previous Director) for all the hard work he put in on our behalf over the last few years.

Peter Smith

Statistics New Zealand

Wellington
As mentioned in the last Newsletter we’ve recently been recruiting amongst recent statistics graduates. From that recruiting round we have new arrivals, Richard Arnold, Temaleti Tupou, Rachel Kyle, Bella Liao, Katrina Young and Gareth Minshall. Another arrival was Sharon Clark’s baby Andrea born in September. Arriving from the Australian Bureau of Statistics to work for SNZ for two years is Adam Thomas, in exchange for Mathew Cronin and a second round pick in the 2001 AFL draft. Departures include Keith MacLeod for his OE. It’s getting to the stage there are more SNZ Mathematical Statisticians in the UK than here. Jon Briggs has departed for four months in Europe, though going in their winter is a little novel.

Sharleen Forbes has returned from working on her PhD in Perth to my relief (I was filling in for her). The PhD is complete, much to Sharleen’s relief. Next newsletter we’ll let you know if she is Dr. Forbes. Debra Taylor has been to Washington DC for discussion on various aspects of survey designs with the Bureau of the Census, plus to attend the Federal Committee on Statistical Methodology (FCSM) conference. Steve Johnston has returned
Seminars in Wellington include Max Wigbout on ANOTA (ed. note ANalysis Of TAbles) and Pete McMillen on discriminant analysis. Susan Linacre, head of methodology at the ABS, visited to discuss aspects of research at the ABS and SNZ, as well as defining, measuring and publishing quality measures in official statistics (dear to the heart of John Cornish).

**Christchurch**

Christchurch also benefited from the graduate recruitment with Michael Robertson starting in Survey Methods. A recent return to the fold has been Penny Barber, who has been working at the Australian Bureau of Statistics for two years. She found the ABS very interesting, though the building they work in sounds very '70s (i.e. awful). A recent move has been of Carolina Kol from Survey Methods to Business Surveys Development, so Penny is now acting section head in her place while we advertise the position. Pat Coope attended the Survival Analysis workshop in Auckland early December wearing her two hats (working for SNZ and for Chch Clinical School).

Susan Linacre also visited the Christchurch office. We’ve had the benefit of a couple of seminars on statistical work at the ABS from Penny. Other seminars include “Estimating Kokako numbers” from Allyson Seyb and Pat talking about Categorical Data Analysis. Victoria Wilcox has recently been to WAYS (Workshop of Australian Young Statisticians) in Wollongong and had an enjoyable time. She presented a reworked version of her NZSA talk on outlier adjustment in QGDP to the young statisticians, and the word we got via the great statistical grapevine was she did extremely well. While in Oz she also visited the ABS to talk to their time series experts and found that rewarding. We will miss her when she moves to Napier in February.

**Activities**

Statistics New Zealand has recently conducted a new Agricultural Production Survey and is currently developing two surveys (Survey of Older People in 2000 and Survey of Saving and Net Worth in 2001).

**Agricultural Production Survey:**

Statistics New Zealand has recently developed a livestock and cropping (grain/arable) survey funded by the Ministry of Agriculture and Forestry. Survey questionnaires were sent out in July 1999 asking for information about livestock numbers, land use and area in cropping. Provisional data are expected to become available in December 1999 with final results due around five months later. The main objective of the Agriculture Production Survey in 1999 is to provide reliable, up-to-date estimates for livestock, grain/arable cropping, poultry and land use. A survey of non-livestock farmers (horticulture) is planned for June 2000. The survey results are used by a wide range of industries and sector groups, including businesses providing farming inputs, support services and primary product processing to farmers. The meat processing and transport sectors use livestock numbers to forecast capacity needs. The 1999 Agriculture Production Survey sample (about 40,000 farms) was drawn from the population frame ‘AgriBase’. AgriBase is a land-based database containing national farming information maintained by AgriQuality New Zealand.

**Survey of Older People in 2000:**

The New Zealand government has commissioned research into the living standards of older people in New Zealand. The Survey of Older People in 2000 is a standard of living survey of the population aged 65 years and over. The survey is being developed on behalf of the Superannuation Task Force 2000, which has been established to develop a stable retirement income framework that is flexible enough to cope with a changing environment. The Survey of Older People will collect information on access to services, sources of support, health needs, income and assets and ability to purchase requirements. This information will be used to look at what determines and influences the standard of living of New Zealanders aged 65 and over and will help government with policymaking and program development. The method chosen to run the survey is a supplement to the Household Labour Force Survey in the March 2000 quarter. The survey results are expected to be reported back to the client in June 2000. The field test is planned to commence November 1999. Questionnaire design and sample design will commence in December 1999. The initial survey will be held February 2000.

**Survey of Saving and Net Worth in 2001:**

The Retirement Incomes Policies Report (1997) of the Periodic Report Group called for improved statistics on saving and net worth. Specifically, they wanted better information on the level of private provision for retirement. The group stated that a measure of wealth is needed to improve the understanding of retirement issues through better informed analysis, to provide a factual foundation for improved decision making by government, to improve public understanding and awareness and to increase the likelihood of political consensus. Information from the survey will be available for analysis to assist the Periodic Report Group in 2003. Statistics New Zealand is currently undergoing a consultation round to develop survey objectives. The project commenced in July 1999 and data will be available by June 2002.

Richard Penny
University of Canterbury

Here at Canterbury, late 1999 saw everyone mainly focused on exams and the marking thereof. Marco Reale has been coordinating the upcoming New Zealand Statistics conference scheduled for September 1st 2000. The theme for this conference is statistical applications to economics and medicine, papers in other areas of statistics are also welcome. You can get more information via the web page http://www.math.canterbury.ac.nz/nzsc.shtml or by contacting Marco Reale directly m.reale@math.canterbury.ac.nz. We are calling it “A Year 2000 Statistics Odyssey” and Malcolm Faddy is the invited speaker pertinent to the medical slant of the meet.

The department had an end of year lunch, which included a farewell for one of the secretaries, Lucinda, who is leaving for Australia. Her friendly personality and excellent Latex-ing will be much missed by the department.

Two of our postgraduates, Andy McKenzie and Michelle Butler, recently attended the local postgraduate conference and gave respective presentations on “Biomathematics - the new biology” and “The relationship between sudden infant death syndrome (SIDS), season and environmental temperature in Canterbury - retrospective, present and prospective profiles”. Both found the annual postgraduate conference held from 19-21 November useful for its coverage of diverse areas of postgraduate study and workshops on writing theses and publishing papers. A large number of University of Canterbury staff and staff from other institutions were involved in the meeting, whose theme was “strength in diversity”.

We congratulate Nigel Sinclair for his prize at (stats) Honours level and wish him well in his new job in Sydney. Nigel was the only Honours student (of 4) to tackle my optional theoretical assignment on distribution free methods extending Kruskal Wallis procedures to the concept of stochastic heterogeneity - and he received an A+ to boot! Michelle Butler hopes to pursue further PhD studies in 2000 under the supervision of Irene Hudson and Professor R Ford at the Chch Hospital. Michelle and Nigel both excelled with an A+ in their Honours projects - well done!

Irene Hudson was an invited speaker as part of an open forum on women in post-graduate studies, part of the Nov 19 postgraduate workshop. She represented mathematics and statistics and joined 5 other women academics from the departments of Physics, Plant and Microbial Sciences, Feminist studies, History and Geography. Strength in diversity continued to echo through these discussions.

In December Malcolm Faddy and Jennifer Brown attended SEEM3 - Third Conference on Statistics in Ecology and Environmental Monitoring meeting, Otago University. Later in December, Malcolm Faddy and Irene Hudson presented papers at the International Biometrics 1999 meeting at the University of Tasmania, Hobart, Australia. Irene gave a paper on “Oblique axes of spatio-temporal variation in Eucalypt fibre morphology - whole tree variation in E. globulus”, research work which is part of an ongoing collaboration between University of Canterbury and the University of Melbourne. Malcolm facilitated discussions and presented a paper entitled “Some general models for data with extra zeros” at the Workshop on Nonstandard Mixtures on Dec 17.

In early January 2000 Irene Hudson spent 2 weeks at the Institute of Land and Food Resources, University of Melbourne, completing research on flowering phenology and synchronicity, and sampling, now and then, Melbourne’s array of food and wine! Marco Reale hosted his ex-PhD supervisor, Dr Granville Tunnicliffe Wilson (Lancaster University, UK) for 2 weeks, a time of great productivity, as I see it from 2 offices down the corridor!! Granville presented a well attended seminar on Dec 1st on “A Class of modified high order auto-regressive models with improved resolution at low frequency cycles”. Year 2000 promises to be a hectic year with possible new moves into formalised medical research on campus and 3 of the statistics staff on one or more kind of leave.

Irene Hudson

AgResearch

AgResearch has been restructured. The Statistics Group is now a national group and is headed by Peter Johnstone. The group is part of the science division and is clearly separate from support services. A small victory for Statistics! Barbara Dow has “rejoined” the AgResearch team at Ruakura, moving from HortResearch where she has been since the CRIs were formed. She will be based at the Dairying Research Corporation. Fred Potter has joined AgResearch in Palmerston North, moving from Crop & Food.

Biometrics 99, at Hobart, in December was well supported by AgResearch Statisticians. Peter Johnstone gave an invited talk on “Planning Comparative Experiments”. David Baird, Harold Henderson, David Saville and Martin Upsdell also participated. Peter is the incoming President of the Australasian Region of the Biometric Society. David Baird visited Canberra in February where he gave a talk to the Australian Statistics Regional meeting and attended the CSIRO Biological Statistics Research Group meeting in Braidwood.

Harold Henderson
The NZ Statistical Association, founded in 1948, is New Zealand’s only association for professional statisticians. The association has about 400 individual members and is growing strongly. Many of its members are employed by universities, government departments or research institutes, with growing participation by senior students, who are offered free membership for their first year.

The constitutional aims and objectives of the association are the encouragement of theoretical and applied statistics in New Zealand. In 1992 the association agreed on a more comprehensive set of vision and mission statements including the short description:

The mission of the NZSA is to lead New Zealand to value and make intelligent use of statistical thinking and good statistical practice.

Services to Members
Members receive The Australian and New Zealand Journal of Statistics quarterly and are kept up to date on statistical happenings within New Zealand and interesting overseas developments with regular newsletters. A feature of the New Zealand statistical year is the annual three-day conference, normally held in mid-year. At the 1995 annual conference the association adopted a ‘Code of Ethics’.

Links with other Bodies
The association is an affiliated organisation of the International Statistical Institute and maintains close relations with a number of statistical societies around the world. It is also a member body of the Royal Society of New Zealand and is part of the Mathematical Sciences Council of New Zealand.

Survey Appraisals and Public Questions
The Survey Appraisals and Public Questions Committee aims to raise the standard of statistical practice and the level of public understanding of statistics in New Zealand by conducting independent appraisals of sample surveys, opinion polls and other statistical statements in relation to the statistical validity of their results. It is regularly called upon to comment on contentious polls and surveys.

Education
The Education Committee aims to improve the quality of statistical education for New Zealand students. It participates in advisory groups related to curriculum matters and helps organise conferences and courses for the benefit of those teaching statistics at all levels. With the support of some of our corporate members, the association sponsors prizes for statistical excellence at each of the regional Science Fairs.

Application to join NZSA
Complete the online form on the NZSA web site or send this form to NZSA, Box 1731, Wellington.

I wish to join the New Zealand Statistical Association
Name:.............................................................
Address:...............................................................
...............................................................
...............................................................
Phone:........................................Fax:.......................
Email:..............................................................
Permission to publish email address: Yes/No
Occupation:............................................................
Gender: Female/Male (for statistical purposes!)
Employer:............................................................
Areas of Interest:...................................................
Ordinary members NZ $35, Overseas $40
Student and Retired NZ $20, Overseas $22.50
(Note: First year free to students enrolled at Australasian universities, or who are graduates of NZ universities and not in full-time employment)

Payment details, in increasing order of cost to NZSA
* Payment by automatic payment or telebank:
Please ensure that your name will appear on our bank statement (e.g., Subs Mary Smith, Dunedin)
Bank 020 Bank of New Zealand
Branch 500 BNZ Centre, Wellington
Account 0019525-00 New Zealand Statistical Association

* Payment by cheque: Make out to New Zealand Statistical Association (Inc)

* Payment by MasterCard or Visa:
Please supply this information
Credit Card number ...............................................
Cardholder’s name ................................................
expiry date ..................................................
(amount $NZ)...........................................
Signature:........................................Date:................

The New Zealand Statistical Association
PO Box 1731, Wellington, New Zealand
Phone: (09) 373 7599 x5053 Fax: (09) 373 7018
Email: a.miller@auckland.ac.nz
Web: www.stat.auckland.ac.nz/nzsa