PREFACE AND INDEX

As a matter of personal convenience, I have decided to gather my published work, as well as some unpublished material, into several volumes. This will greatly assist problems of accessibility and recall, which escalated with the passing years. Moreover, the process of organisations may lead to new ideas which can be exploited in due course.

After a great deal of thought, I have decided to present the papers in, more of less, chronological order. Although this makes any systematic treatment of the papers by subject matter impossible, it will allow additions to be made without disruption.

In order to indicate the area of research, I have labelled papers listed in the table of contents by means of the following system

a;	agriculture	m;	medicine
e;	expository	s;	sampling
g;	genetics	t;	technical

This provides a rough classification, and some papers have more than one label.*

Publishing technical papers is a slow process, and it is particularly difficult to encourage journals to publish applied papers with a heavy loading of statistics and mathematics. In order to be as up to date as possible, I am including four papers in this collection which are currently being reviewed by journals. They belong to the difficult category which had just been referred to and, although these papers will be published, exactly where and when that will be has yet to be determined.

* *Note: this classification stops at paper number 84.*

Published Papers of George Michael Tallis (1959 - 2009)

1   Body Measurements in relation to beef type and certain carcass characteristics (with E.W. Klosterman). J. Amin.Sci. 18: 108 – 115, 1959   (a)

2   Efficient estimates of heritability from paternal half-sib correlations (with E.W.Klosterman) J. Anim.Sci., 18: 2: 622 – 628   (g)

3   A topcross breeding experiment with outbred and inbred Hereford sires: 1 Line comparisons and phenotypic correlations (with E.W.Klosterman and V.R. Cahill). J.Anim.Sci., 18: 745-754, 1959   (a,g)

4   Sampling errors of genetic correlation coefficients calculated from analyses of variance and covariance. Aus. J. Statist., 1: 2: 35 - 43, 1959   (g)

5   The sampling errors of estimated genetic regression coefficients and the errors of predicted genetic gains. Aus. J. Statis., 2: 2: 66-77, 1960   (g)

6   Effect of some controllable errors on estimates of genetic parameters, with special reference to early post-natal growth in merino sheep. J. Amin.Sci., 19: 4: 1208 – 1214, 1960   (g)

7   Some aspects of the efficiency of large scale artificial insemination operations in sheep (with S.S. Y. Young). Aust. J. Agric. Sci., 11:6: 1017 – 1025, 1960   (a)

8   The moment generating function of the truncated multi-normal distribution. J. Roy. Statis. Soc., B, 23: 1: 223 – 229, 1961   (g,t)

9   An application of non-parametric statistics to truncated selection. Appl. Statist., 10: 2: 77-82, 1961   (g,t)

10   Performance index for lifetime production (with S.S. Y. Young). J Anim. Sci., 20: 3: 506-509, 1961   (g)

11   The use of a generalised multinomial distribution in the estimation of correlation in discrete data. J. Roy. Statist. Soc., B, 24: 2: 530 – 534, 1962   (g,t)

12   Maximum likelihood estimation of parameters of the normal, log-normal, truncated normal and bivariate normal distributions from grouped data (with S.S.Y. Young) Aust. J. Statist., 4: 2: 49 – 54, 1962   (t)

13   A selection index for optimum genotype Biometrics, 18: 1: 120-122, 1962   (g)

14   The maximum likelihood estimation of correlation from contingency tables. Biometrics, 18: 342 – 353, 1962   (g,t)

15   Specific gravity of live sheep (with R W Moore and B D Gream). Nature, 198: 4876: 214, 1963   (a)

16   Elliptical and radical truncation in normal populations. Ann. Math. Statist., 34: 3: 940 – 944, 1963   (g,t)

17   The effects of the length of oestrus and number of inseminations on the fertility and twinning rate of the merino eye (with A.A. Dunlop). Aust. J. Agric. Res., 15:2: 282-288, 1964   (a)

18   Further models for estimating correlation in discrete data. J. Roy Statist. Soc., B, 26: 1: 82-85, 1964   (g,t)

19   Models for distribution on pasture of infective larvae of the gastrointestinal nematode parasites of sheep (with A.A. Donald). Aust. J. Biol. Sci., 17: 2: 504 – 513, 1964   (a)

20   Sampling errors associated with family selection. Biometrics, 320: 1: 118-121, 1964   (g)

21   The relationship between live measurements and edible meat in merino wethers (with H. N. Turner and G. H. Brown). Aust. J. Agric. Rec., 15: 3: 446-452, 1964   (a)

22   A note on the estimation of larval concentrations on pasture. Aust. J. Biol. Sci., 17: 4: 1016-1019, 1964   (a)

23   The use of models in analysis of some classes of contingency tables. Biometrics, 20: 4: 832-839, 1964   (a,t)

24   Formulae to improve Wald's approximation for some properties of sequential tests (with M.K Vagholkar). J. Roy. Statist. Soc., B, 27: 74-81, 1965   (t)

25   Plane truncation in normal populations. J. Roy. Statis. Soc., B, 27: 2: 301-307, 1965   (g,t)

26   Equilibria under selection for K alleles. Biometrics, 2: 1: 121-127, 1966   (g)

27   A migration model. Biometrics, 2: 2: 409-412, 1966   (g)

28   A stochastic approach to the study of parasite populations (with M Leyton). J. Theor. Biol., 13: 251-260 1966   (a)

29   Approximate maximum likelihood estimates from grouped data. Technometrics, 9:4: 599-606, 1967   (t)

30   The use of fractional moments for estimating the parameters of a mixed exponential distribution (with R. Light). Technometrics, 10: 1: 161 -175, 1968   (t)

31   Selection for an optimum growth curve. Biometrics, 24: 1: 169 – 177, 1968   (g)

32   The identifiability of mixtures of distributions. Appl. Prob., 6: 389-398, 1969   (t)

33   General models for r-molecular reactions (with R.T. Leslie). Appl. Prob., 6: 1: 74-87, 1969   (t)

34   Note on a calibration problem. Biometrika, 56: 505-508, 1969   (t)

35   Exact first-and second- order moments of estimates of components of covariance (with C.A. Rohde). Biometrika, 56: 3: 517-525, 1969   (g,t)

36   Stochastic models of populations of helminthic parasites in the definitive host. 1 (with M.K Leyton) math. Biosci., 4; 38-48, 1969   (m)

37   Sampling methods for estimating average faecal egg-count in animal populations (with D. Culpin). Division of Mathematical Statistics, CSIRO, Technical Report No. 27. 1969 (a,s)

38   Examination of the accuracy of hardness testing machines (with M.O'Callaghan and D.E. Shaw). Division of Mathematical Statistics, CSIRO, Technical Report No. 30, 1969   (t)

39   Aspects of reliability of a urinary 17 – hydroxycorticosteroid assay (with G. Sarfaty). J. Clin. Endocrinology, 31: 52-59, 1969   (m)

40   Probability of a woman with advanced breast cancer responding to adrenalectomy or hypophysectomy (with G Sarfaty). The Lancet, 3: 685-687, 1970.   (m)

41   Further models for the distribution on pasture of infective larvae of the strong-yloid nematode parasites of sheep (with A.A Donald). Math. Biosci., 7: 179-190, 1970   (a)

42   A deterministic model for the life cycle of a class of internal parasite of sheep (with G Gordon and M. O'Callaghan). Math. Biosci., 8: 209-226, 1970   (a,t)

43   Some stochastic extensions to a deterministic treatment of sheep parasite cycles. Math. Biosci., 8: 132-135, 1970   (a,t)

44   Estimating the distribution of spherical and elliptical bodies in conglomerates from plane sections. Biometrics, 23: 1: 87-103, 1970   (t)

45   Some extensions of discriminant function analysis. Metrika, 15: 86091, 1970   (t)

46   Discriminant analysis by computer (with D.E.Shaw, J. Williams and G. Sarfaty). Aust. Comp. J., 2: 3-8, 1970   (m,t)

47   A note on sufficient statistics and the exponential family. Proceedings on the Cambridge Philosophical Society, 69: 309-313, 1971   (t)

48   A note on roots of the polynomial equation $f(x) = a$ with reference to stability (with G. Gordon). SIAM J Appl. Math., 21: 186-191, 1971   (t)

49   The relation of semen and vaginal mucous traits to fertility in the Australian merino (with A.A Dunlop, G. H. Brown and B D Gream). Aust. J. Agric. Res., 23: 295-307, 1972   (a)

50   Basic results of a study of bilateral adrenalectomy for advanced breast cancer; urinary steroids and related data in 148 patients (with G Sarfaty and P Pitt). Med. J. Aust., 2: 877-881, 1973   (m)

51   On the distribution of the time to reporting cancers with application to breast cancer in women (with G Sarfaty). Mathem. Biosci., 19: 371-376, 1974   (m)

52   A general classification model with specific application to response to adrenalectomy in women with breast cancer (with G Sarfaty and P. Leppard). Comp. & Blomed. Res., 8: 1-7, 1975   (m)

53   Survival rates as a function of tumor volume for women with breast cancer (with G Sarfaty and P Leppard) Mathem. Biosci. 1975 Vol 1   (m)

54   The relationship between a class of asymptotically normal estimators and goodness-of-fit tests (with P.L. Chesson). Aust. J. Statist., 18: 53-61, 1976   (t)

55   On the Optimal allocation of clinical treatments (with P. Leppard and G Sarfaty). Mathem. BioSci., 28: 331-334, 1976   (m,t)

56   The random introduction of patients into a clinical trial: various aspects of estimates and probabilities of survival (with G Sarfaty and P. Leppard). Comp. & Biomed. Res., 10: 205-212, 1977.   (m)

57   The effect of accessing medical records by date of death on estimates of survival (with P. Leppard and G. Sarfaty). Biometrics, 34: 662-664, 1978   (m,s)

58   Note on robust estimation of finite populations. Sankhya, C: 40 136 – 138, 1978   (s)

59   The relationship of metastic activity to primary tumour size with special reference to breast cancer (with P. Leppard, T J O'Neill & G Sarfaty)Aust. J. Statis., 21:1-17,1979 (m)

60   Screening for breast cancer (with T J O'Neill, P Leppard and G Sarfaty). Aust. J. Statist., 2: 1-23, 1980   (m)

61   Analysis of detection processes for breast cancer (with T J O'Neill) Biometrical J., 23: 203-217, 1981   (m)

62   Identifiability of mixtures (with P Chesson). J. Aust. Math. Soc., 32: A: 339-348, 1982 (t)

63   A note on the balanced sampling and robust genetic predictors. Biome. J., 24: 663-672, 1982   (g,s)

64   Goodness of fit. Encyclopaedia of Statistical Sciences, 3: 451-462, 1983   (e)

65   An alternative approach to the analysis of permutations (with B R Dansie). J. Appli. Statist., 32: 110-114, 1983   (t)

66   A note on some exact tests for failure rates for randomised block designs. Blom. Praxim., 24: 27 – 33, 1984 (t)

67   The nucleus problem (with A W Davis). Blom. J., 26: 95-100, 1984 (t)

68   Constrained selection. Jap. J. Genet., 60: 151-155, 1985 (g)

69   Constrained selection: Corrigendum and addendum. Jap. J. Genet., 61: 183-184, 1986 (g)

70   Permutation models: Encyclopaedia of Statistical Sciences, 6: 687-690, 1985 (e)

71   The epidemiology of disease using hazard functions (with T J O'Neill and P Leppard) Aust. J Statist., 27: 283-297, 1985 (m,t)

72   Transfer systems and covariance under assortative mating. Theor. Appl. Genet., 70: 497-504, 1985 (g)

73   Predictive densities and selection with genetic applications. Can. J. Statis., 14: 281-288, 1986 (g,t)

74   On the optimality of balanced samples. Statist. And Prob. Letters, 4: 141-144, 1986 (s)

75   On the joint asymptotic distribution of additive genotype for polygenic characters. J Math Biol., 24: 233-235, 1986 (g)

76   A renewal approach to estimating conception rates under A.I. in sheep. Biom. Praxim., 27: 9-19, 1987 (a)

77   Ancestral covariance and the Bulmer effect. Theor. Appl. Genet., 73: 815-820, 1987 (g)

78   The joint effects of selection and assortative mating on a single polygenic character (with P Leppard). Theor. Appl. Genetic., 75: 41-45, 1987 (g)

79   The joint effects of selection and assortative mating on a single polygenic character (with P Leppard). Theor. Appl. Genetic., 75: 278-281, 1988 (g)

80   The analysis of survival data from a central cancer registry with passive follow-up (with P Leppard and T J O'Neill) Statistics in Medicine, 7: 483-490, 1988 (m)

81   The effects of selection and assortative mating on genetic parameters. Journal of Animal Breeding and Genetics, 1988 (g)

82   Internal estimation and controlled selection with applications to sheep (with P Leppard). Theor. Appl. Genet. 1989 (g)

83   The evaluation of the mean and covariance of the truncated multinormal distribution (with P Leppard). J. Roy. Statis. Soc., 1988 (t)

84   A note on balanced cluster sampling, Statistics and Probability Letters, 1988   (s)

85   Conditioned life tables from registries with unidentified random losses (with P Leppard and T J O'Neill) Stats. In Med. 12: 767-775, 1993

86   Compartmental models and competing risk. Math. Biosciences 121: 111 – 122, 1994

87   A stochastic model for team golf competitions with applications to handicapping. Austral. J. Statis. 36(3) 257-269, 1994

88   A review of technical features of breast cancer screening illustrated by a specific model using South Australian cancer registry data (with T J O'Neill and P Leppard) Stats. Meth. In Med. Res., 4: 55-72, 1995

89   Is length of life predictable? (with P. Leppard) Human Biol. 69: 6: 873 – 886, 1997

90   Are causes of death predictable (with P Leppard and D Hansen) Human Biol. 70: 1: 117-128, 1998

91   Misclassification, correlation and cause of death studies. Human. Biol., 74: 75-81, 2002

92   A note on the sensitivities of self-reporting and screen detection of primary breast tumours (with P Leppard and T J O'Neill) Aust. NZ J Stat. 45: (1) 7-18, 2003

93   The effect of World War 1 and the 1918 Influenza Pandemic on Cohort Life Expectancy of South Australian Males born in 1881-1900 (with P Leppard and C E M Pearce) Journal of Population Research 21: No 2, 2004

94   Expected Lifetime in South Australia 1841 – 1996 (with P Leppard and C E M Pearce) Transactions of the Royal Society of S. Aust (2004) 128(1), 37 – 42

95   The effect on survival of early detection of breast cancer in South Australia (with P Leppard and T J O'Neill) IOS Press, Model Assisted Statistics and Applications 1 (2005, 2006) 115 – 123

96   Evaluation of the impact of breast cancer screening in South Australia (with T O Neill) Internal Medicine Journal 39 (2009) 174-178