

THE ROYAL COMMISSION ON HISTORICAL MANUSCRIPTS

Report on the correspondence and papers of

JOHN LEONARD JINKS

(1929-1987)

geneticist

deposited in Birmingham University Library

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THE ROYAL COMMISSION ON HISTORICAL MANUSCRIPTS

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Catalogue of the papers and correspondence of

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(1929 - 1987)

Compiled by Peter Harper and Timothy E. Powell

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GENERAL INTRODUCTION

The material was received in October 1988 via Dr H S Pooni, a colleague in the Department of Genetics, Birmingham University.

John Leonard Jinks was born 21 October 1929 in Stoke-on-Trent. He attended the local Longton High School before winning a state studentship to Birmingham University. In 1950 he was awarded a first class degree in Botany and became an Agricultural Research Council Scholar in the Department of Genetics, gaining his doctorate in 1952, to be followed by a D.Sc in 1964.

Jinks remained at Birmingham University for almost the whole of his career. He worked in the ARC Unit of Biometrical Genetics as Scientific Officer 1953-59 and Principal Scientific Officer 1960-65. He was appointed honorary lecturer in the Department of Genetics 1960, reader 1962 and professor and head of department in 1965 in succession to Sir Kenneth Mather. Between 1972 and 1975 Jinks served as Dean of the Science and Engineering Faculty and was Pro-Vice-Chancellor 1981-85. Throughout his career Jinks retained a close association with the ARC (now the Agricultural and Food Research Council), serving on the Council 1979-85 and as Secretary and Deputy Chairman from 1985. He also served as a member of the Science Research Council 1975-79.

Before his untimely death at the age of 57 Jinks received many honours in recognition of his outstanding work in microbial, biometrical and behavioural genetics. These included Fellowship of the Institute of Biology 1968, Fellowship of the Royal Society 1970 and the CBE 1984.

This small collection consists principally of material relating to Jinks's research, lectures and publications. Dr Pooni's assistance with the identification of research material has been invaluable and his

continued

comments (with due acknowledgement) have been incorporated in the catalogue entries. Wherever possible the research material has been linked with the published papers, references being in the form Bibliog.... A list of Jinks's publications is presented at A.5.

Peter Harper
Timothy E Powell
Bath 1988

SECTION A BIOGRAPHICAL AND BIBLIOGRAPHICAL A.1 - A.6

- A.1 Obituaries from the Times and Independent, notice of memorial service and order of service.
- A.2 Miscellaneous biographical items, 1964, 1969, 1972.

1964 items relate to Jinks's acceptance of Birmingham Chair of Genetics from 1 October 1965.
- A.3 Appointment as Birmingham Pro-Vice-Chancellor, 1981, 1984.
- A.4 Appointment as Secretary to Agricultural and Food Research Council, 1985.
- A.5 List of publications.
- A.6 'J.L.Jinks as referred to in other than own publications'.
2pp ms by Mrs D M Jinks.

SECTION B

RESEARCH

B.1 - B.41

- B.1 - B. 3 Contents of a folder inscribed 'D Expt 1952',
divided into three for ease of reference.
- Experimental data. A little dated in 1953 and 1954.
- 3 folders.
- B.4 - B. 6 Contents of a folder inscribed 'Analysis of Maize,
Galeopsis etc' and 'REANALYSED DIALLELS', divided
into three for ease of reference. These analyses
of various diallels were used by Jinks 'to support
his views on the genetical control of heterosis' and
relate to Bibliog. 12: 'A survey of the genetical
basis of heterosis in a variety of diallel crosses',
Heredity, 1955. (H S Pooni, October 1988).
- The material includes programme of Genetical Society
meeting, 7 November 1953 and undated letter from
Jinks (at the Carlsberg Laboratory, Copenhagen) to
K (later Sir Kenneth) Mather.
- 3 folders.
- B.7, B. 8 Contents of a folder divided into two for ease of
reference; 'results of experiments which formed the
basis of a 1956 publication co-authored by J L Jinks
and Cavalli-Sforza' (H S Pooni, October 1988).
- The 1956 publication is Bibliog.13: 'Studies on
the genetic system of *Escherchia coli* K-12', J Genet.
- 2 folders.
- B.9 - B.13 Contents of a folder inscribed 'Components of Heterosis',
divided into five for ease of reference.
- Includes carbon copy of Bibliog.19: 'Estimation of the
components of heterosis' (with R Morley Jones), Genetics,
1958; data (some dated 1967), and material (timetables,
lecture synopsès etc) re Birmingham Department of Botany
M.Sc course in conservation and utilization of plant genetic
resources 1970-72 and Birmingham Department of Plant Biology
M.Sc courses 1977-78.
- 5 folders.

Research

- B.14 - B.18 Contents of a folder inscribed 'Adaptations to HgCl₂ and Sugars', divided into five for ease of reference. Contains data and drafts re experiments on Aspergillus glaucus including ms draft of Bibliog.21: 'Selection for adaptability to new environments in Aspergillus glaucus', Journ.Gen.Microbiol, 1959.
- 5 folders.
- B.19 - B.21 Contents of a folder divided into three for ease of reference; experimental data, drafts. 'Contains data from 1960 experiments with Aspergillus Nidulans and Aspergillus glaucus' (H S Pooni, October 1988).
- 3 folders.
- B.22 - B.26 Contents of a ring binder divided into five for ease of reference; 'experiments on phage genetics conducted by J L Jinks during 1960' (H S Pooni, October 1988).
- The results were published in Bibliog. 25 and 26: 'Gene structure and function in hIII region of bacteriophage T4' and 'Internal suppressor of the hIII and tu45 mutants of bacteriophage T4', Heredity, 1961.
- 5 folders.
- B.27 Contents of a folder inscribed 'PARITY IN RATS' and 'mature body weight individual diallels'. This is 'the data which forms the basis of the 1963 paper co-authored by J L Jinks and P L Broadhurst' (H S Pooni, October 1988).
- The 1963 paper is Bibliog. 34: 'Diallel analysis of litter size and body weight in rats', Heredity.
- B.28 Contents of a folder inscribed 'A score analyses of individual diallels'; data which may relate to Bibliog. 34.

Research

- B.29 - B.33 Contents of a folder inscribed 'Nicotiana rustica', divided into five for ease of reference.

Data including computer print-outs headed 'Multiple Regression Analysis' and ms draft of Bibliog.71: 'The analysis and interpretation of differences between reciprocal crosses of Nicotiana rustica varieties' (with J M Perkins and S R Gregory), Heredity, 1972.

5 folders

- B.34 Contents of a folder inscribed 'Schizophyllum data Secⁿ, Temp.'

Data 'from an experiment where selected lines of schizophyllum commune have been raised in different temperature regimes. These experiments showed that selection environment affected the sensitivity of the selected lines' (H S Pooni, October 1988). Relates to Bibliog.81: 'The genetical architecture of general and specific environmental sensitivity' (with V Connolly), Heredity, 1975

- B.35 Data relating to preceding. 'Selections made in the previous expts are tested in these experiments for their phenotype sensitivity to temperature variations'. (H S Pooni, October 1988). The data formed the basis of Bibliog. 84: 'Determination of the environmental sensitivity of selection lines by the selection environment' (with V Connolly), Heredity, 1975.

- B.36 Contents of a folder inscribed 'Folk Songs'; maps, diagrams, tables re frequency of intervals in folk music in different parts of Europe. nd.

'This is uncompleted work. John passionately believed that almost everything is inherited. Here he is trying to work out if relative frequencies of 2 and 4 intervals varies in various areas of Europe' (H S Pooni, October 1988).

Research

B.37 - B.39 Folder of unidentified experimental data, divided into
three for ease of reference. nd.

3 folders.

B.40, B.41 Miscellaneous data, results. nd.

2 folders.

Lectures and publications

C.10, C.11 Contents of a folder inscribed 'Genetics II and I/S', divided into two for ease of reference; includes lecture lists for Genetics II and I/S courses (School of Biological Sciences Session 1972-73), practical experiments and ms notes and drafts on 'Twin Studies', 'Intelligence' and 'Heritability'.

2 folders.

C.12, C.13 Contents of a folder inscribed 'GENETICS FOR BIOCHEMISTS', divided into two for ease of reference; 'outlines of John's lectures to Biochemistry undergraduates. There are a few pages which seem to be from his own notes when he was an undergraduate' (H S Pooni, October 1988).

2 folders.

Invitation Lectures

C.14 Royal Society Lecture, 29 October [?1980] 11pp typescript.

Jinks lectured on 'biometrical genetics' as 'a framework for understanding the results achieved by plant breeders'.

C.15 Osborne Memorial Lecture, Edinburgh University, 27 October 1981. 15pp typescript.

Jinks lectured on the 'Birmingham approach to biometrical genetics'.

SECTION C

LECTURES AND PUBLICATIONS

C.1 - C.22

C. 1 - C.15 Lectures
C.16 - C.22 Publications

LECTURES

Birmingham University Lectures

- C.1 - C.3 Contents of a folder inscribed 'Old version. 3H and M.Sc Biom[etrical] Genetics', divided into three for ease of reference; ms notes and drafts for lecture courses. nd.

3 folders.
- C.4 - C.7 Contents of a folder inscribed 'B.Sc. 3H Biometrical Genetics. Epistasis and $G \times E$ intⁿ', divided into four for ease of reference; includes corrected copy of 'Chapter 5. Components of Means Interaction and Heterosis', paper by Jinks on 'The Impact of Genotype-Environmental Interaction on Plant Breeding: Definitions and Genetical Aspects' 1976 (Bibliog. 91), and ms notes.

4 folders.
- C.8, C.9 Contents of a folder inscribed 'Biometrical Genetics Gen/21/151, Gen 3, M.Sc. App/Gen', divided into two for ease of reference; ms drafts headed 'Hardy-Weinberg equilibrium', 'The theory of diallel analysis', 'TWINS 3H' and 'Continuous Variation: Biometrical Genetics'. nd, latest bibliographical reference 1979.

2 folders.

Lectures and publications

PUBLICATIONS

- C.16 'The red cytoplasmic variant of Aspergillus nidulans (with C F Arlett and M Grindle), Heredity, 1962. (Bibliog. 29).

Ms draft. Folder also includes ms draft by Jinks and Grindle 'The cytoplasmic basis of the red variant of Aspergillus nidulans' and typescript draft by Arlett 'Cytoplasmic mutation and nucleo-cytoplasmic interaction in aspergillus nidulans'.
- C.17 'Genotype-environmental interactions in devised recombinant inbred lines' (with N E M Jayeskara). Not in Bibliog. but may relate to papers published by Jinks and Jayeskara in 1977 and 1978 (Bibliog. 102 and 107).

Incomplete ms drafts, experimental results. The folder also includes ms draft by H Boughey 'Joint selection for both extremes of mean performance and of sensitivity to a macroenvironmental variable. III Growth curves', dated '1/6/77'. Cf Bibliog. 102-104.
- C.18 'Sources and biases of the predictors of the properties of recombinant inbreds derived by single seed descent' (with H S Pooni), Heredity, 1979. Bibliog. 112.
Ms draft.
- C.19 'Predicting the properties of pure breeding lines extractable from a cross in the presence of linkage' (with H S Pooni), Heredity, 1982. Bibliog. 133.
Ms draft.
- C.20 'Joint analysis of triple test crosses of a single population with associated and dispersed inbred testers' (with H S Pooni), Heredity, 1983. Bibliog. 137.
Ms draft.

Lectures and publications

- C.21 'Comparison of inbred lines produced by single seed descent and pedigree inbreeding' (with H S Pooni), Heredity, 1984. Bibliog. 141. Ms draft.
- C.22 'Description and illustration of the practical applications of biometrical genetics to plant breeding' (with H S Pooni), Proceedings of the Vith meeting of Eucarpia, 1986. Bibliog. 163. Ms draft.