

Catalogue of the papers and correspondence of

JOHN STODART KENNEDY FRS

(1912 - 1993)

Compiled by Jeannine Alton and Peter Harper

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GENERAL INTRODUCTION

PROVENANCE

The papers were received from Kennedy's room at the Department of Zoology Oxford, and from his home in Oxford.

OUTLINE OF THE CAREER OF JOHN STODART KENNEDY

Kennedy was born in 1912 at Titusville, Pennsylvania. His father, an Anglo-Scottish engineer, had met his American mother in Bangkok where he was tramways manager and she was visiting her aunt and missionary uncle. The family settled back in England after the First World War, and Kennedy was conventionally educated at preparatory schools followed by Westminster School 1925-1928 where his developing interest in biology was encouraged. At University College London 1929-1933 several important steps were taken: he chose Animal Behaviour as his special subject in the Zoology course, became acquainted through lectures with the Mechanist/Vitalist controversy in the interpretation of animal behaviour, was increasingly active in left-wing politics (he was a member of the Communist Party) and virtually ceased all contact with his conservative and establishment home and family. From this time, Kennedy seems to have supported himself by savings, scholarships and grants.

After working for an M.Sc. at UCL under G.S. Fraenkel, Kennedy obtained, via B.P. Uvarov, a three-year grant to work for a Ph.D. (awarded 1938) on locusts under the supervision of D.L. Gunn at Birmingham University; this also brought him his first experience of field-work for a few months in the Anglo-Egyptian Sudan. A longer spell of field-work abroad seemed likely when Kennedy (by now married) accepted a post at the Rockefeller Foundation Malaria Research Laboratory at Tirana, Albania in 1938, but this proved short-lived when the laboratory was closed down in the wake of the unpredicted invasion of Albania by Italy on Good Friday 1939. After various short-term appointments, he was again posted abroad as Research Officer in the Colonial Office's Middle East Anti-Locust Unit; he served 1942-1944, travelling widely and organising both Soviet and RAF crop-dusting aircraft. He later described the work as 'frustrating' and indeed the results, obtained in the conditions of the time, were of limited value; Kennedy himself became seriously debilitated and needed a period of recovery on his return.

During his Middle East travels, he had received an invitation from V.B. Wigglesworth to join his new Agricultural Research Council Insect Physiology Unit at the Department of Zoology Cambridge, and took up the appointment in 1946, working at the Field Station and University Farm. He also made a new family life there. His first marriage ended in divorce in 1946, and in 1950 he married Claudette, widow of a victim of Auschwitz where she herself had been imprisoned. They had two children and the marriage was very happy.

Kennedy remained at Cambridge for twenty-one years, working continuously on aphids, concentrating - as he preferred to do - on research, keeping teaching and administration to a minimum, but producing a steady flow of published work which brought him an international reputation and, in 1965, election to the Fellowship of the Royal Society. With the looming retirement of Wigglesworth and the consequent disbandment of the ARC Unit, Kennedy spent two worrying years 1965-1967 uncertain about the future location of his work. His ideal solution would no doubt have been to remain in Cambridge where family ties were by then strong, but this was not to be, and in 1967 he accepted an invitation from Imperial College London to move with a small group to the Field Station at Silwood Park. Here, with the rank of Deputy Chief Scientific Officer from the ARC and the title of Professor of Animal Behaviour from London University (later Emeritus Professor and Senior Research Fellow of Imperial College), he continued to work on aphids, moths and pheromones until 1983.

He then accepted an invitation from Professor Sir Richard Southwood (formerly Head of the Department of Zoology and Applied Entomology at Imperial College) of accommodation in the Department of Zoology Oxford. With the help of grants from the Royal Society he continued research and publications on insect flight patterns, but towards the end of the 1980s concentrated his activities on what he called in his autobiographical notes 'anthropomorphic misinterpretation of insect behaviour in various contexts'. This came to preoccupy him in his own writings and in his comments on those of others; he finally published his views in his only book *The new anthropomorphism* in 1992.

In 1984 Kennedy received the Gold Medal (Zoology) of the Linnean Society of London. In 1985 he received the Wigglesworth Medal of the Royal Entomological Society of London.

Although Kennedy's health was not strong - he had undergone major surgery in 1979 - he maintained a serious involvement in research and in the activities of the Department, where his sudden death occurred on 4 February 1993.

DESCRIPTION OF THE COLLECTION

The material is presented as shown in the List of Contents. Additional explanatory notes, information and cross-references are appended where appropriate to the separate sections, sub-sections and individual entries in the body of the catalogue. The following paragraphs are intended only to draw attention to items of particular interest.

Section A, Biographical and autobiographical, documents most stages of Kennedy's scientific career from the 1930s, including his wartime service, his period at Cambridge and subsequent moves to Imperial College and Oxford. There is virtually no personal material about Kennedy himself, but there are a few items relating to his parents and to his father's 'Vertical Lifter Aircraft' which Kennedy attempted to promote at the very end of his life. This section also includes Kennedy's own autobiographical notes, which have been drawn on in compiling this account.

Section B, Research, presents the material alphabetically by topic. It includes notebooks, notes, diagrams and drafts and, for some topics, considerable correspondence. The timespan is wide, ranging from photographs and observations in Albania in 1939 to the drafts and exchanges of ideas leading up to his 1992 book *The new anthropomorphism*. Kennedy had a well-deserved reputation for devising experimental techniques and apparatus such as windtunnels and carousels. These are not documented other than by the photographs in Section J.

Section C, Imperial College London, includes material relating to Kennedy's move to the College and as a senior ARC staff member. See the introductory note to the section. There is also material on several collaborative research projects.

Section D, Lectures, papers, broadcasts, covers a considerable time-span, 1936-1987, and addresses a very wide spectrum of audience from informal college or departmental talks to specialist conferences. Kennedy gave several radio talks on locusts and aphids, though he does not seem to have been a natural broadcaster.

Section E, Publications. Kennedy's bibliography included at A.2 lists 110 publications. Few of them are documented in this short section, which does however include a few items not listed there. The publication history of *The new anthropomorphism* is recorded here.

Section F, Societies and organisations. Kennedy's involvement with professional organisations was kept deliberately restricted in order not to interfere with research time, though he had a long-standing connection with the Anti-Locust Research Centre and, after 1965, participated in the affairs of the Royal Society.

Section G, Correspondence, is the most substantial of the collection, of interest both for the intensity of the scientific exchanges and also for some of the long-term sequences with friends and colleagues such as D.L. Gunn and V.B. Wigglesworth as well as with many overseas correspondents. The introductory note to the section describes in more detail the content and interest of the material.

Section H, References and recommendations, is another substantial section. In addition to many grant applications which Kennedy refereed for UK and overseas institutions, there is an extensive section (with an introductory note) relating to his work for journals and publishing houses in careful comments and assessments of work submitted.

Section J, Photographs. Of special interest are the many photographs taken 1942-1944 of the work of the Middle East Anti-Locust Unit. There are also photographs of windtunnels, and several group photographs of meetings and symposia.

It will be seen that the collection well reflects Kennedy's unbroken commitment to research, which he insisted was for him the only worthwhile activity. Teaching and administration were avoided or kept to the minimum acceptable. Participation in the activities of learned or professional groups, including editorial boards, was similarly restricted. There is for example no section on conferences in the collection, though Kennedy did attend such gatherings from time to time and gave several of the lectures in Section D at them; his own preference, however, was for small congenial meetings at the Cambridge 'Bun Shop' (a pub near the Department) or practical small-scale discussions in the laboratory. He was insistent on the publication of new findings when he was satisfied that they were scientifically adequate, and held colleagues and research students to the same course, expressing disappointment when work was delayed. From earliest days his avowed aims, which he thought he had found in Marxism, were accuracy and objectivity. They made him a fearsome antagonist in oral or written argument where he could be disconcertingly clinical in exposing unsound work, or could press for clarification with logic-chopping rationalism. On more than one occasion he described himself as a 'cold fish' and claimed to have difficulty in expressing emotion.

Yet this is a partial, indeed a misleading view. His temperament was in many ways that of an enthusiast. His quest for 'truth' in his chosen field of animal behaviour was a lifelong passion which could lead him to overstate a case - which he would quickly acknowledge and withdraw if contrary evidence were forthcoming. His letters often pour out his ideas and ask for reciprocity with an almost endearing frankness. He went to great trouble with visitors and students. He and his wife Claudette extended warm friendly hospitality in their home to innumerable colleagues.

In his autobiographical notes Kennedy quotes V.B. Wigglesworth's description of him: 'a disinterested soul'. This enigmatic statement is perhaps the wisest conclusion.

ACKNOWLEDGEMENTS

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Jeannine Alton
BATH 1994

SECTION A BIOGRAPHICAL AND AUTOBIOGRAPHICAL A.1-A.47

A.1, A.2 AUTOBIOGRAPHICAL

A.3-A.22 CAREER

A.23-A.34 FAMILY AND PERSONAL

A.35-A.47 DIARIES

Biographical and Autobiographical

AUTOBIOGRAPHICAL

- A.1 Autobiographical account and bibliography, probably prepared for Royal Society 1992.
- A.2 Miscellaneous cvs, selected 'significant items of work', publications etc. Various dates 1937-1986.
- Poem, n.d.

CAREER

- A.3 Registration at University College London 1930.
- A.4 Award of M.Sc. London, for thesis on 'Cleaning movements in the blow-fly' 1937. See D.1.
- A.5 Applications for posts at Bedford College London, University College Cardiff, Emmanuel College Cambridge 1937. Includes cv and testimonials
- A.6 Correspondence with P.A. Buxton 1937 leading to Kennedy working as Avebury Student in the Department of Entomology, London School of Hygiene and Tropical Medicine.
- A.7 Conferment of Ph.D. Birmingham, 1938 (programme only).
- A.8 Testimonials 1939.
- A.9 Material relating to Kennedy's wartime employment by the Colonial Office on the Middle East Anti-Locust Unit. Offer of appointment 1942, arrangements for discharge 1944, medical examination showing Kennedy to be suffering from low blood pressure and exhaustion from overwork.
- A.10 Material 1944-1946 relating to Kennedy's wartime employment by the Ministry of Supply at the Chemical Defence Experimental Station, Porton Down, from 1945 (starting date deferred because of overwork) to January 1946. Includes Kennedy's outline of equipment requirements and organisation of the work.

Biographical and Autobiographical

- A.11 General correspondence and papers 1946-1967 exchanged with Agricultural Research Council, covering Kennedy's period at Cambridge with ARC Insect Physiology Unit. Includes appointment January 1946, promotions, visits, conferences and reports etc. up to Kennedy's move to Imperial College. See C.3 for similar material 1967-1982.
- A.12 Conferment of D.Sc. University of London 1955. Brief correspondence, list of publications submitted.
- A.13 Application for post of Head of Department of Entomology, Rothamsted Experimental Station 1955. Correspondence, drafts. K. Mellanby was appointed. Kennedy's correspondence with Wigglesworth for the period at G.200 refers to the matter.
- A.14 Correspondence on possible appointments 1957, 1959.
- A.15 Correspondence and papers 1965-1967 on the retirement of Wigglesworth, the consequent closure of the Cambridge ARC Unit and Kennedy's future career. Although the closure had been foreseen for several years, Kennedy and his family suffered considerable strain as various enquiries and negotiations dragged on. Possible moves explored include Long Ashton Bristol, University College London, Glasgow University, Anti-Locust Research Centre London, Cambridge University, Oxford University, Brunel University. Kennedy's notes on his aims and requirements are also included. See also correspondence with Wigglesworth at G.201, with T. Weis-Fogh at G.194 and Section C *passim* for the eventual move to Imperial College London and the ARC Unit at Silwood Park.
- A.16 Appointments at University of London.

Fellowship, University College, 1966.
Conferment of the title 'Professor of Animal Behaviour', 1967.
Conferment of title 'Emeritus Professor of Animal Behaviour', 1977.
- A.17 General correspondence and papers exchanged with Agricultural Research Council on Kennedy's pension and FSSU arrangements, 1975, 1977. Includes formal notification of retirement from ARC, at age of 65, 30 September 1977. Kennedy's letter of 28 March gives details of his war service.
- A.18 Appointment as Research Associate, Department of Zoology, Oxford 1982, proposed Fellowship of Wolfson College, notification of research grants from Royal Society 1984 (£3000), 1987 (£9250 for work on 'Antagonistic Induction').
- A.19 Award of Linnean Medal for Zoology 1984, arrangements for presentation.

Biographical and Autobiographical

- A.20 Invitation to Kennedy's 80th birthday celebration, Queen's College Oxford.
- A.21 Correspondence and papers 1991-1992 exchanged with N. Russell and his research project on 'an investigation of creativity in the origin of scientific ideas and technical advances in the biological sciences'. Includes Kennedy's selected 'highlights' of his research and publications, and arrangements for taped interviews to be deposited in the British Library National Sound Archive.
- A.22 Memorial meeting for Kennedy, 27 February 1993. Guest list, tributes from T.R.E. Southwood, James Kennedy, P. Miller.

FAMILY AND PERSONAL

- A.23 Miscellaneous notes and information about the Kennedy and Stodart families.
- A.24 Miscellaneous biographical information about James John Stodart Kennedy (Kennedy's father, known as Stodart Kennedy). Includes apprenticeship 1896, testimonials for work on Siamese tramway, Imperial Ministry of Munitions Canada, English Electric Company, Kennedy and Donkin Engineers etc.
- A.25 Miscellaneous items relating to Kennedy's parents, correspondence, notices of memorial services.
- A.26-A.32 The 'Multiple Aerofoil Vertical Lifter Aircraft'.
- This was a project which Stodart Kennedy developed during his service in Hong Kong. His attempts to interest engineers in the practical application of the design met with no success from 1915 onwards, but he persevered with various versions and improvements at intervals for many years. After the publication of his book *The new anthropomorphism*, Kennedy himself took up the threads and became persuaded of the feasibility of the idea, writing letters and memoranda and trying to interest engineers in the project. He too met with no success before his death.
- Kennedy was for many years estranged from his family and had marked differences of opinion and temperament from them. It is interesting, however, to see Stodart Kennedy approaching controversy in a similar fashion to his son, annotating documents and conducting a polemical argument with his correspondents in the margins of their letters.
- A.26 Correspondence and papers 1915-1916. Includes 'Memorandum on Airships' and ensuing correspondence from Stodart Kennedy's father James J. Kennedy and an engineer colleague A.B. Raworth.

Biographical and Autobiographical

- A.27 Lecture on 'Speed and Traffic', with a manuscript note by Kennedy 'Bases for private lecture by JJSK to a gathering of the staff engineers of Kennedy and Donkin, at St. Ermin's Court near Broadway and St. James's Park on April 6th 1934 (supposedly taking account of research and development up to the end of 1933).'
- A.28 'Outline notes for and some wording for, a (probably informal) paper to be read at I.C.E.', 1936.
- A.29 Versions and revisions of 'Aviation Memo' 1946, 1951.
- A.30 1953 version, fully worked out with calculations and figures.
- A.31 Correspondence from Raworth 1962, after Stodart Kennedy's death, enclosing correspondence and memoranda of 1948 about the project.
- A.32 Kennedy's notes, memoranda, correspondence, arrangements for meetings etc. related to the project 1992-1993.
- A.33, A.34 Personal correspondence
- A.33 Shorter correspondence, thanks for hospitality, letters of congratulation, condolence etc. 1962-1983.
- A.34 Shorter correspondence 1946-1987.

Includes Kennedy's refusal of a post in Canada 1950 because of his dislike of North American politics, refusal of US visa in 1964, and other items of biographical and personal interest.

DIARIES

- A.35 Small pocket diary 1943 India and Middle East.
- A.36 Spiral-back diary 1970.
- A.37 Spiral-back diary 1971.
- A.38 Spiral-back diary 1975.

Biographical and Autobiographical

- A.39 Loose pages March-December 1975, from spiral-back engagement diary.
- A.40 Spiral-back engagement diary 1976.
- A.41 Similar 1977.
- A.42 Similar 1978.
- A.43 Similar 1979.
- A.44 Similar 1980.
- A.45 Similar 1981.
- A.46 Similar 1982.
- A.47 Similar 1983.

SECTION B	RESEARCH	B.1-B.57
	B.1-B.22	APHIDS
	B.23, B.24	BEHAVIOUR/BEHAVIOURISM
	B.25-B.31	ETHOLOGY
	B.32	KLINOKINESIS
	B.33-B.38	LOCUSTS
	B.39-B.42	MOSQUITOES
	B.43-B.53	MOTIVATION
	B.54	PHASES AND MATURATION
	B.55-B.57	RESEARCH PROBLEMS

The alphabetical presentation by topic as listed above has been adopted for convenience.

While the whole of Kennedy's research career could be subsumed under the heading of animal physiology and behaviour, there were nevertheless certain themes, experimental animals or publication commitments which took precedence at various times. Kennedy's own file descriptions reflect this, and have been preserved wherever practicable.

Research

The material may include notebooks, notes, diagrams and drafts for papers or publications. For some topics such as aphids (B.10-B.18) or ethology (B.30, B.31) there are specific related correspondence files kept as such by Kennedy; it should however be noted that correspondence may be included in several other folders than those designated, and that many of the topics are widely discussed in the general correspondence files in Section G.

Photographs of some of the work are in Section J.

Research

APHIDS

These were the focus of Kennedy's research at Cambridge when he was a member of V.B. Wigglesworth's ARC Unit of Insect Physiology in the Department of Zoology. Kennedy's own work was mainly conducted at the Field Station at Storey's Way and the University Farm off Huntingdon Road. In his autobiographical notes he says 'I remained with Wigglesworth's Unit working continuously on aphids for 21 years until 1967 when the Unit was dissolved automatically on his retirement'. When Kennedy himself retired and moved to Oxford in 1983 he resumed research on aphids funded by a grant from the Royal Society.

- B.1 Hard-backed loose-leaf binder with thumb index.
- Detailed experimental notes and observations, indexed by topic. Various dates 1946, 1947. Notes on visits to Rothamsted and Porton 1946.
- At rear of book, notes on work in Sudan and Middle East 1942, including a little personal material. See also B.33.
- At back of book, notes on work at Tirana 1938-1939, and also notes and experiments dated 1936 perhaps inherited by Kennedy from previous workers at the Rockefeller Foundation Malaria Research Laboratory. See also B.39-B.42.
- B.2 Hard-backed loose-leaf binder with thumb index.
- Experiments, notes and observations, indexed by topic. Various dates 1947-1950.
- Notes on the literature, latest dates 1960s.
- B.3 Work on infested fields at University Farm 1947-1950 including meteorological information, patterns of infestation, graphs, map of University Farm, aerial photographs taken by RAF. See also J.10-J.17.
- B.4-B.8 Notes, drafts, correspondence etc. 1957-1958 on various aspects of aphidology, some arising from publications by Kennedy and by others, probably preparatory material for Kennedy's review (with H.L.G. Stroyan *q.v.*) *Biology of aphids* (*Ann. Rev. Ent.* 3, 1959).
- B.4 Correspondence with J.L. Auclair on 'Plant resistance to aphids'; includes manuscript of paper by Auclair.
- B.5 Notes and ideas, some dated 1957-1958, for papers and work to be done on aphids.

Research

- B.6 Notes and drafts, January-February 1958, mainly on sensory-motor functions.
- B.7 Notes, drafts, a little correspondence, 1958, on food intake.
- B.8 Draft papers, by L.R. Taylor, C.G. Johnson and others, on aphid flight curves and distribution, with manuscript comments by Kennedy.
- B.9 Notes and papers on colour vision of aphids, mainly relating to the work of V. Moericke (*q.v.*), 1950s, 1964.
- B.10-B.18 Correspondence on aphids. Material kept separate by Kennedy. The content is heterogeneous: information on material and methods, requests to visit or work in laboratory (see also G.239), arrangements for lectures, reprint exchanges, some more substantial exchanges. Content is similar to, but more specialised than, that in 'Shorter Scientific Correspondence' at G.214 *et seq.*
- | | | | |
|------|-----------|------|------------------|
| B.10 | 1946-1947 | B.15 | 1960-1962 |
| B.11 | 1948-1950 | B.16 | 1963-1964 |
| B.12 | 1951-1953 | B.17 | 1965-1967 |
| B.13 | 1954-1955 | B.18 | 1968, 1977, 1987 |
| B.14 | 1956-1959 | | |
- B.19-B.22 Later work on aphids, at Oxford.
- B.19 Hard-backed loose-leaf binder with thumb index.
- Experiments, notes and observations on aphids on beans, by Kennedy and collaborators, indexed by topic. Various dates 1985-1988.
- B.20 Hard-backed loose-leaf binder with thumb index. Spine labelled 'APHIDS 38-49'.
- Notes and observations for experiments numbered 38-49, mainly by Kennedy and/or with his comments. Various dates 1986-1987.
- B.21 Hard-backed loose-leaf binder with thumb index. Spine labelled 'APHIDS 3'.
- Notes and observations for experiments numbered 50-58, mainly by Kennedy and with many notes and comments by him. Various dates 1986-1987.

Research

- B.22 Hard-backed loose-leaf binder with thumb index. Spine labelled 'ETHOLOGY APHIDS 10-37'.
- Notes and observations for experiments numbered 59-66, mainly by Kennedy or with his comments. Various dates 1987-1988.
- At rear of book, some additional notes on some of the experiments.

BEHAVIOUR/BEHAVIOURISM

- B.23 Contents of folder labelled 'Pavlov Sherrington'.
- Notes, drafts, a little correspondence, 1953, 1959, linked to Kennedy's paper given at Cambridge Symposium on 'Psychological Theories of Animal Behaviour' (originally intended for publication in *Quant. J. exp. Psychol.* but in the end only circulated privately).
- Includes newsletters of Society for Cultural Relations with the USSR and other articles on Pavlov, Behaviourism, conditioned reflexes, Soviet psychiatry etc.
- B.24 Notes and drafts for articles and papers.
- Includes synopsis and notes for proposed book 'Behavioural successions' 1964, notes and drafts for Kennedy's contribution, 'Behaviour as physiology', to Festschrift for V.B. Wigglesworth 1966, notes at meeting on 'Patterning in Behaviour' 1980.

ETHOLOGY

- There is considerable overlap in content between these folders and B.23, B.24 above, but Kennedy's labelling of his material has been followed.
- B.25, B.26 'Ethology Notes'. Contents of folder so inscribed: notes, drafts, information.
- B.25 1949-1957. Includes programmes and notes taken at Society for Experimental Biology Symposium on 'Physiological Mechanisms in Animal Behaviour' Cambridge July 1949, and at Association for the Study of Animal Behaviour meeting February 1955.
- B.26 1959, 1963, 1967. Notes for 'Ethology Conference' 1959, notes on W.H. Thorpe 1963.

Research

- B.27 Drafts, revisions, speaking and reading texts for Kennedy's paper 'Modern ethology as a subjectivist theory of animal behaviour', given at a meeting in Cambridge of the Experimental Psychology Group. See B.23. Kennedy regarded this as a crucial statement of his thinking and included a copy with his later notes for his last publication. See B.48.
- B.28 'Recent developments in the theory of animal behaviour', 23 page draft paper, latest reference 1953. Not listed in Bibliography.
- B.29 'Aphid behaviour as a chain of hierarchically-organized reflexes'. Manuscript draft and notes. 1959. Related to Kennedy's paper at Montreal 'The experimental analysis of aphid behaviour and its bearing on current theories of instinct', see correspondence with G.P. Baerends in B.30.
- B.30, B.31 'Ethology Corresp.'. Contents of folder so inscribed.
- | | | | |
|------|-----------|------|-----------|
| B.30 | 1953-1958 | B.31 | 1959-1987 |
|------|-----------|------|-----------|

KLINOKINESIS

- B.32 This had been a long-term interest of Kennedy, which he felt he had never adequately dealt with for publication. In a letter to J. Brady 18 May 1990 (G.24) he writes:

"You may perhaps remember that Charles David and I (initially together with David Marsh and Peter Furness) were preparing a review on klinokinesis in 1973 because it was such a muddle, especially after Gunn had first rejected the whole idea but then withdrew his objections in view of the work on bacteria. But then Charles went off to Berkeley and the review never got finalized - although I still have the fat wallet-file I accumulated for it. I don't think it would have dealt adequately with the point now at issue between the three B's, which I think is now possible. Nevertheless, a draft MS dated 1975 that I still have does make the crucial point about two levels of description/analysis that I've made above. We said that 'While the basic klinokinetic response is quite simple, the resulting spatial manoeuvres take many forms and unnecessary difficulties arise when these two levels of organisation are confused'."

This is the wallet-file referred to, and includes notes, drafts, references etc. Various dates 1974-1986.

Research

LOCUSTS

The reactions of locusts to temperature and humidity were the subject of Kennedy's doctorate thesis under D.L. Gunn 1935-1938, a period which included seven months' field work in the Anglo-Egyptian Sudan.

The material here refers to Kennedy's wartime work with the 'Middle East Anti-Locust Unit' 1942-1945 and later research. See also A.35, B.1, F.1, J.1-J.8.

- B.33 Tagged folder of letters and cables, reports and papers (some carbon copies) March 1942 - May 1944 on the work of the Anti-Locust Unit. The material follows Kennedy's order i.e. the order in which he received or despatched items rather than chronological order disrupted by wartime delays.
- Includes setting-up plans, descriptions of team members' tasks and scope of work, reports on results and future organisation. Kennedy's detailed exchanges with B.P. Uvarov (mis-spelled as Uvaror in some of the official correspondence) rehearsing the frustrations of organising the complex operation in the Indo-Persian region, and his relations with the Soviet crop-dusting aircraft and their crews assigned to the project, are of interest.
- B.34 Correspondence and papers 1944-1945, relating to the above but not included in the folder.
- Official meetings to discuss anti-locust operations, correspondence.
- B.35 Miscellaneous data and reports on desert locusts in Sudan and Oman 1942, and a little related correspondence 1955.
- B.36 'Thoughts on the problem of a declining locust plague, with proposals for field studies.' Paper by Kennedy, July 1947.
- B.37 Correspondence and papers on locust plagues, 1979, 1980.
- B.38 Correspondence and papers 1990-1992 on proposal for research on 'Analysis of the causal factors in locust gregarization', to be carried out at the Department of Zoology Oxford by S.J. Simpson, P.R. White and P.L. Miller. Kennedy and L. Barton Browne were advisers.
- Includes drafts, comments and discussions on proposal, Progress Report October 1991 - March 1992.

Research

MOSQUITOES

This documents Kennedy's work at the Rockefeller Foundation's Malaria Research Laboratory, Tirana, Albania, work brought to an end by the Italian occupation of Albania at Easter 1939. See also correspondence with M. Bates (G.15, G.16) and B.1.

- B.39 Hard-backed, loose-leaf binder with thumb index.
Experimental notes and observations, summaries of work, photographs of apparatus and sites, indexed by topic, on larval reactions to current, temperature and humidity.
- B.40 Hard-backed notebook of observations and data (not all in Kennedy's hand) December 1938 - February 1939.
- B.41 Similar, work almost all in Kennedy's hand, various dates October 1938 - April 1939, and also including brief notes January 1940 while Kennedy was working at the Wellcome Entomological Field Laboratory, Esher.
- B.42 Notes etc. on reactions of mosquito larvae to wavelets in water. Includes photographs taken in Albania 1938-1939 probably removed from B.39, and notes for a talk on the subject given to the Entomological Society 7 October 1955.

MOTIVATION

Considerations of animal consciousness, and of the scientific basis for studies of animal behaviour, underlay virtually all Kennedy's research and writings. In the 1980s, however, they increasingly assumed a dominant position in his thinking, culminating in *The new anthropomorphism* (C.U.P. 1992), his last published work. In a letter to V. Labeyrie of October 1986, he writes:

"I have resumed my 30-years-old polemical campaign in favour of a consistently materialist interpretation of animal behaviour and against the anthropomorphism which has never been abandoned and is now increasing." See G.105.

Similar statements, and discussions ensuing, can be found in the general correspondence in Section G as well as in the folders below.

The material here consists of notes, correspondence and lectures, many exchanged with colleagues in the Department of Zoology Oxford, as well as painstaking drafts for the final publication. Correspondence with publishers can be found at E.9 - E.11.

Research

- B.43-B.46 Contents of a folder inscribed 'Ethology - Motivation - Documents'.
- B.43 Material relating to 'Round-table Conference on Animal Nomenclature', held at Cambridge 18-22 July 1949. Participants, report by W.H. Thorpe annotated by Kennedy.
- B.44 Correspondence and papers, requests for information and comment from colleagues 1984-1987.
- B.45 Correspondence, memoranda and notes 1984-1985 mainly with S.J. Simpson and P. Miller about a proposed collaborative book provisionally titled 'Physiology and psychology in the study of animal behaviour'. Includes synopses, discussion notes etc.
- B.46 Correspondence and papers 1986-1989, mainly on Kennedy's paper 'Animal motivation : the beginning of the end?' in *Perspectives in chemoreception and behaviour*, New York 1987.
- B.47 Notes etc. on 'foraging', 'searching' and 'goal-directed' behaviour 1983-1989. Includes brief exchanges with J.R. Krebs.
- B.48 Miscellaneous notes 1975, 1984-1989. Also includes copy of Kennedy's 1953 lecture 'Modern ethology as a subjectivist theory of animal behaviour' (see B.27).
- B.49 Material 1987-1988 relating to the 'Motivation Discussion Group' at Oxford, arising from correspondence with J.Z. Young who opened the discussion at the first meeting.
- B.50 Correspondence and papers relating to the Department of Zoology Animal Behaviour Research Group Oxford, mainly Kennedy's lectures 'Are animals motivated?' given 1985-1989 to 3rd year undergraduate course.
- Also includes a little material on organisation, content and examination of the 'Animal behaviour' option at Oxford.
- B.51-B.53 *The new anthropomorphism*
- Drafts, notes, revisions for book; working titles were 'Animal motivation' and 'Neo-anthropomorphism'.
- B.51 Hard-backed loose-leaf binder with thumb index.
- Manuscript notes, drafts, quotations and notes from the literature, indexed by chapters of draft synopsis, heavily corrected and revised, 1984-1989.

Research

- B.52 Black spring-back binder.
- Corrected draft February-March 1991; corrections and notes on front and back fly-leaves as well as on manuscript.
- B.53 Black spring-back binder.
- Corrected draft April-May 1991, with 'extra pieces to go into the galley proofs' tucked into front.

PHASES AND MATURATION

- B.54 Correspondence, notes and drafts c.1956-1960, some fragmentary, some more substantial. Includes heavily-corrected and revised manuscript 'A biological characterization of aphids as specialized parasites of plants with rapid growth and development: the herb-colonizing viviparae' November 1957, two copies, differently annotated, of Kennedy's paper 'VBW's [Wigglesworth's] "Physiology of insect metamorphosis"' November 1957 and addendum 1958, unidentified draft.

RESEARCH PROBLEMS

- B.55-B.57 Contents of folder so inscribed.
- The time-span covered is 1948-1991 (and undated), thus including ideas for work at Cambridge, Imperial College and Oxford. Some are brief outlines for possible work by Kennedy or a research student, others include more developed ideas on work in progress or proposed.
- B.55 1948-1966. Includes Kennedy's proposal for a period of part-time working at the Anti-Locust Research Centre.
- B.56 1967-1981.
- B.57 1982-1991 and undated.

SECTION C	IMPERIAL COLLEGE	C.1-C.17
	C.1, C.2	KENNEDY'S CAREER AT IMPERIAL COLLEGE
	C.3-C.6	AGRICULTURAL RESEARCH COUNCIL AND INSECT PHYSIOLOGY GROUP
	C.7-C.16	RESEARCH
	C.17	LECTURES AND TEACHING

In 1967 Kennedy accepted the College's invitation to come with a small group (in particular his long-term colleague A.R. Lees) to work in the Department of Zoology at the Field Station at Silwood Park, Ascot.

This invitation was the culmination of a long and often stressful period of negotiation. The retirement of V.B. Wigglesworth as Quick Professor automatically entailed the disbandment of the ARC's Insect Physiology Unit at Cambridge and the redeployment of its members. Kennedy, a member of the Unit since 1946 and a senior scientist on the salaried staff of the ARC, felt particularly isolated and distressed. C.1 gives some account of the protracted negotiations; further material can be found at A.15, and in the correspondence with Wigglesworth at G.201 and T. Weis-Fogh at G.194.

Though Kennedy regretted the necessity to move from Cambridge, he found his period at Silwood Park productive and congenial. The ARC continued to fund a new group for the study of insect physiology within the Department of Zoology and Applied Entomology headed by Professor T.R.E (later Sir Richard) Southwood, and the College provided good laboratory accommodation and facilities. On a personal level, he was promoted by ARC to the rank of Deputy Chief Scientific Officer, and he held the title of Professor of Animal Behaviour in the University of London, while remaining a member of ARC's external staff.

Imperial College

On his retirement at the age of 65 in 1977 Kennedy was made Emeritus Professor of the University and Senior Research Fellow of the College, where he continued to work until 1983 when he moved to the Department of Zoology at Oxford.

Additional information about research and activities of the ARC group is to be found in some of the general correspondence files in Section G, especially those relating to long-term colleagues such as J.N. Brady, C.D. David, A.R. Ludlow, J.E. Moorhouse and M.J. Way.

Note For convenience, the term 'Silwood Park' has been adopted to refer to the laboratory and its work.

Imperial College

KENNEDY'S CAREER AT IMPERIAL COLLEGE

- C.1 Papers and correspondence 1963-1967, exchanged between Imperial College, ARC, Kennedy and others leading up to the move from Cambridge and the opening of the new group at Silwood Park.
- C.2 Papers and correspondence 1973-1985, on retirement arrangements, future of ARC Insect Physiology Group, Kennedy's appointment as Senior Research Fellow (1977), and as Honorary Fellow (1981).

AGRICULTURAL RESEARCH COUNCIL AND INSECT PHYSIOLOGY GROUP

- C.3 General correspondence 1967-1982, including appointments and promotions, reports on work, visits and conferences, Kennedy's membership of ARC Glasshouse Crops Research Institute visiting group and report, future of Silwood Park Group.
- C.4-C.6 Insect Physiology Group at Silwood Park.
Reports, staff lists, correspondence, information, memoranda, visits by ARC to Group.
- C.4 1971-1979. Includes report by Kennedy on 'The current American R & D effort toward insect pest control by manipulating behaviour : impressions from a visit in August-September 1976'.
- C.5 1980-1988. Includes correspondence and memos on future of Group, and copy of Final Report 1982-1987.
- C.6 ARC staff at Silwood Park.

RESEARCH

- C.7-C.10 'Background research on tsetse behaviour', project funded by Ministry of Overseas Development, later Overseas Development Administration, (ODA Scheme No. R.2107) and directed by Kennedy. J.N. Brady (*q.v.*) was appointed Research Fellow.

Includes negotiations, budgeting etc. for initial application and periodic renewals, interim and final reports, correspondence, administration of grant etc.

- | | | | |
|-----|-----------|------|------|
| C.7 | 1968 | C.9 | 1972 |
| C.8 | 1969-1971 | C.10 | 1975 |

Imperial College

- C.11 Report on 'Host-plant finding behaviour in phytophagous Diptera in a large wind tunnel', on ARC Grant AG8/129, 1975-1976. Annotated by Kennedy.
- C.12 ARC Grant Application by J.N. Brady and Kennedy for work on 'Control by flying insects of their movements relative to the ground' 1976, with a few notes and drafts for letters.
- C.13 Correspondence and papers 1973-1982 relating to collaborative research with ICI Entomology Section, on 'The mechanism and inhibition of oviposition'. Visits, negotiations, project outline, report.
- C.14-C.16 Requests to visit or work at Silwood Park, letters of thanks from visitors. Includes some discussion of research in hand or proposed.
- C.14 1967-1969 C.16 1980-1983
- C.15 1970-1979.

LECTURES AND TEACHING

- C.17 Miscellaneous material for second and third year work. Includes Kennedy's third year lecture on 'Behavioural Physiology in historical perspective'.

SECTION D LECTURES, PAPERS, BROADCASTS D.1-D.50

D.1-D.41 LECTURES AND PAPERS

D.42-D.50 BROADCASTS

The chronological sequence D.1-D.41 covers the time-span 1935-1987 and shows Kennedy to have been throughout his career an assiduous disseminator of research results and theories. It varies in scope from brief notes or outlines for a university class or society to more fully-worked papers for a conference or discussion meeting; a little correspondence is sometimes included. The notes or drafts are normally dated and bear some indication of where and to whom they were addressed, but are not always fully titled.

All the broadcasts at D.42-D.50 are for the British Broadcasting Corporation.

Lectures, papers, broadcasts

LECTURES AND PAPERS

- D.1 1935
- 'Cleaning movements in flies'. Report on work for M.Sc. at the Department of Zoology University College London 1933-34, under the direction of G.S. Fraenkel.
- D.2 1936
- Paper for Society for Experimental Biology, Birmingham, 1936 (part only).
- D.3 1937
- 'Effect of temperature on locust behaviour in the field', for Society for Experimental Biology, December 1937.
- D.4 1938
- 'The origination of locust outbreaks', for Royal Entomological Society, March 1938.
- D.5 1941
- Notes for 'SEB Oxford'.
- D.6 1945
- Notes for 'Paper read to Porton Civilian Officers Club'.
- Notes 'UCL 1945'.
- D.7 1948
- 'Insect migration. Zoo Tea Party 25 Feb.' [at Zoology Department Cambridge].
- 'Locust migration. R. Ent. Soc. London', 7 April.
- Aphid behaviour (Exhibit) Association of Applied Biologists, 23 July.
- Remarks at discussion, Commonwealth Entomological Conference, London, 14 August.

Lectures, papers, broadcasts

- D.8 1949
- Notes for 'Zoological Society Bristol University', 28 November.
- D.9 1947-51
- Notes for talks to Part II students, Cambridge.
- D.10 1950
- 'Lamarckism, Locusts and Lysenko', for Cambridge Natural History Society Entomological Section, 2 March.
- 'Host specificity of aphids', Entomological Society, 3 May.
- 'Direction of Desert Locust migration', British Association, 5 September.
- D.11 1951
- 'Aphids as plant physiological indicators' SEB (Botanists), 3 January.
- 'The seductive particle' for 'Zoo Tea Party', 19 October. 31pp.
- D.12 1952
- 'Physiological relations between aphids and plants', Queen Mary College London, 1 February.
- 'Insect behaviour in wind' for 'A.S.A.B.', 27 February.
- 'ARC Insecticides Meeting', March.
- 'Host finding and selection' for 'C.E.Z.A.' 12 September. See photograph at J.22
- D.13 1953
- 'Change of host preference with change of form in *Aphis fabae*', for R. ent. Soc. meeting, 1 April.
- 'Insect Flight Symposium', August.
- 'Is modern ethology objective?' for A.S.A.B., 23 October.
- 'Modern ethology as a subjectivist theory of animal behaviour', manuscript draft for Kennedy's paper for Experimental Psychology Group, Cambridge. See B.23, B.27.
- 'Cambridge Natural History Society', 6 November.

Lectures, papers, broadcasts

- D.14 1955

 'WYE' [College Ashford Kent], 25 January.

 Phases, 21 July.
- D.15 1956

 'Locomotory versus assimilatory behaviour in aphids' for SEB, London, 6
 January.

 'Zoo Tea Party', 10 February.

 Ottawa, 23 September.
- D.16 1957

 Talk for visit to Cambridge by British Council course on 'Insecticides in
 Applied Entomology', 2 July.
- D.17 1958

 'Phases in aphids', for 'A.C.R.C.', 4 December.
- D.18 1959

 'Ethology', for 'RAH Dinner speech', 18 June.

 'Ethology Conference Cambridge', 14 October.
- D.19 1960

 'Colour vision in plant finding by aphids' for SEB, 6 January.

 'Bristol Zool. Soc.' (on aphid behaviour), 25 January.

 'Natural experiments, or the future of insect natural history. Presidential
 Address to the Entomological Section of the Cambridge Natural History
 Society', 24 February.

 'Ent. Soc. Colour vision', 2 March.

 'Aphid Dispersal'. Lecture at Helsinki, 28 June. Includes invitation and
 correspondence.

Lectures, papers, broadcasts

- D.20 1961
- 'Eco-physiology of aphid dispersal', Copenhagen 5 March. Includes invitation and a little correspondence.
- 'Continuous polymorphism in locusts', for 'RES Symposium', London, 21-22 September.
- D.21 1963
- 'NAAS Visit', 23 May.
- 'Zoo Tea Talk : Flight-settling Coordination in aphids', 8 November.
- D.22 1964
- 'Intraspecific mechanisms in population regulation', with M.J. Way, for XII International Congress of Entomology, 9 July.
- D.23 1965
- 'Behavioural ecology of aphids', for Natural History Society Entomological Section, 11 February.
- 'Release, priming and waning of behaviour patterns in aphids', for 'Ethological Conference Zurich', 26 September.
- 'Madingley seminar', 10 November.
- D.24 1966
- 'Reciprocal innervation in aphid behaviour', at Zoology Department Glasgow, 11 May. With a little correspondence.
- 'Zoo Tea Talk. More on behavioural coordination in aphids', 21 October.
- 'Reflex analysis of instinctive behaviour', Brunel University Biology Society, 6 December.
- D.25 1967
- Talk for Perse Girls' School [Cambridge] Science Society 20 January.
- 'Coordination of action patterns in an aphid', Oxford, 23 May.
- 'Neurophysiology Group Cambridge', 27 May.

Lectures, papers, broadcasts

- D.26 1968
- 'Integration of instinctive behaviour in aphids', Southampton, 12 March (also at Reading Zoological Society, 28 January 1969).
- 'Navigational aspects of responses to insect attractants', Society of Chemical Industry Pesticides Group, 1 October.
- University of Durham Biological Society, 9 December (correspondence only).
- D.27 1969
- 'Orientation of locusts', Wageningen (Netherlands), 2 June.
- D.28 1970
- 'Central integration of aphid behaviour', Birmingham University Biological Society, 24 February.
- Civil Service Ecology Seminar, 10 November.
- D.29 1971
- Association of Applied Biologists General Meeting on 'The role of insect behaviour in pest control', London, 12 March.
- 'Integration of aphid behaviour', Oxford, 10 May.
- Sussex University, 15 June. Correspondence only.
- 'AAB at Silwood', 18 June.
- D.30 1972
- 'Love life of aphids', 14 February.
- 'Changes of responsiveness in the patterning of behavioural sequences', 14th International Congress of Entomology, Canberra, 23 August.
- D.31 1973
- 'Aphid migration, or how one thing leads to another', Leeds, 15 January. With a little correspondence.
- 'Insect migration', Cambridge Natural History Society, 25 October.
- Ashurst [Silwood Park], n.d.

Lectures, papers, broadcasts

- D.32 1974
- 'Anemotaxis', Fort Collins, Iowa, 24 October.
- 'Early stages of host-finding in aphids', 1974.
-
- D.33 1975
- 'Insect Migration', Bangor, 6 February.
- 'The emergence of behaviour', Cardiff, 27 February. With a little correspondence.
- 'Attraction and repulsion by chemicals', Sussex, 9 December.
-
- D.34 1976
- 'Behaviourally discriminating assays of attractants and repellents', Association of Applied Biologists, 6 April.
- 'Vertical movements of flying aphids', 15th International Congress of Entomology, Washington, 27 August.
- 'Behavioural mechanisms of olfactory attraction', Gainesville [Florida], 31 August.
- 'Gainesville 2nd talk', 2 September.
- 'Current US effort in research and development', Cambridge, 21 September.
- 'Aphid behaviour - or how one thing leads to another', Nottingham 27 January, Exeter, 24 November. Talk also given in Iowa and Stanford 1974. With a little correspondence.
-
- D.35 1977
- 'Aphid migration or riding the wind without losing control', University of East Anglia, Norwich, 10 February.
- 'Behavioural components of pheromone action', Rothamsted, 10 October.
- '"Fall-out" of migrant *Aphis fabae*', Association of Applied Biologists, 15 December.
-
- D.36 1979
- 'Vertical movements ... ', East Lansing Michigan, 17 April. Includes part of Washington talk of August 1976 (D.34).

Lectures, papers, broadcasts

- D.37 1981
- 'Les médiateurs chimiques agissant sur le comportement des insectes', Versailles Symposium, 17 November.
- D.38 1984
- 'The saga of moth sex attraction', Zoology Department Oxford, 2 May. Incorporating material used for seminars in America, November 1983.
- 'Motivation and foraging', Optimal Foraging Group Lunch Talk, Oxford, 7 November.
- D.39 1985
- 'Animal motivation : the beginning of the end', Amherst, 14 May. (Spoken version of contribution to *Perspectives in chemoreception and behaviour*, New York 1987).
- Talk for Ethology and Neurophysiology Group, Sussex, 17 June. Also given at Conference 10 October and for 3rd-year lecture, Oxford, 6 November.
- D.40 1986
- 'Bun Shop' [Cambridge] 18 November, with a manuscript note 'Not delivered'.
- D.41 1987
- 'Entomology Lunch Talk', 9 February.
- 'Is modern ethology objective?', Madingley Lunch Talk, 14 October.

BROADCASTS

- D.42 BBC Home Service, Science Survey, talk on 'Locusts', 31 October 1950.
- Contract, correspondence, script.
- D.43 BBC Third Programme, talk on 'The migration of locusts', recorded 5 December 1952 and also broadcast by Italian Radio. The talk was suggested to producer A. Clow by Kennedy on the basis of general interest aroused by his article 'Man against locust', *Discovery*, January 1951.
- Contract, correspondence, scripts.

Lectures, papers, broadcasts

- D.44 Not used.
- D.45 BBC Woman's Hour, talk on 'How much do we know about ... migration of insects', 23 March 1955.

Correspondence, scripts.
- D.46 BBC Bush House Arabic Talks Unit. Replies for 'Question and Answer' programme, 1956, 1957.
- D.47 BBC Home Service, Science Review, short talk on 'Colour vision in aphids', 6 January 1960.

Contract, script.
- D.48 BBC Network Three, The Animals' World, short talk on 'The Aphid's world', broadcast 25 May, repeated August 1960.

Contract, correspondence, script.
- D.49 BBC Third Programme, talk on 'Natural Experiments' by Kennedy, followed by discussion between him and J.W.L. Beament, 28 January and 10 February 1961.

Contract, correspondence, drafts and broadcast versions, notes for discussion, Audience Research Report on discussion.
- D.50 Shorter correspondence on proposed radio and TV programmes 1962-1980.

SECTION E PUBLICATIONS

E.1-E.13

This section is relatively modest. Although Kennedy published extensively, and put his papers through many drafts, he did not regularly retain these after publication. The material does, however, include some shorter publications and reviews not listed in his bibliography.

For other contacts by Kennedy with editors and publishing houses see H.98-H.136.

Publications

LECTURES AND PAPERS

- E.1 'The behaviour of the desert locust'. Heavily-corrected 5pp. draft, perhaps abstract for Kennedy's major paper in *Trans. R. ent. Soc. Lond.* **89**, 385-542, 1939.
- E.2 Letter to Editor, *Nature*, 1946. Not listed in bibliography.
- E.3 Review of: *Biological Transmission of Disease Agents*, Symposium Proceedings. In *Science Progress* 1963. Not listed in bibliography.
- E.4 Correspondence 1963-1967 on collaborative article with M.J. Way, on 'Intra-specific mechanisms in population regulation', promised for *Biological Reviews*. Perhaps not completed; not listed in bibliography.
- E.5 Correspondence and corrections to Kennedy's contribution 'Behaviour as physiology' to *Insects and Physiology*, 1967.
- E.6 Correspondence and drafts for two articles, 'Grasshopper' and 'Locust', for Aretê publishing company 1979. Not listed in bibliography.
- E.7 Draft and figures for collaborative paper with J.H. Choudhury on 'Maturation feeding in the bark beetle *Scolytus Multistriatus*'. Latest reference 1980. Kennedy published a collaborative paper with Choudhury on flight direction in bark beetles (*Physiol. Ent.*, **5**, 1980) but no paper of the above title is listed in the bibliography.
- E.8 Correspondence 1982-1989 on *Insect Pheromones in Plant Protection* (ed. Jutson and Gordon), to which Kennedy contributed an assessment and a foreword.
- E.9-E.11 *The new anthropomorphism* (CUP 1992)
- E.9 Correspondence with Cambridge University Press 1977, 1990-1992, negotiations, referees' detailed comments, corrections and additions, publishing arrangements and marketing, lists of reviewers.
- E.10 Reviews of published book and a little correspondence arising.
- E.11 Correspondence 1989-1990 with Oxford University Press who were also willing to publish the book.

Publications

- E.12 Draft, notes and material for biographical memoir of A.D. Lees, undertaken 1992 by Kennedy for Royal Society but left unfinished at his death. Includes correspondence, tributes etc.
- E.13 Requests to write books or articles, reviews etc. Declined. 1950-1983.

SECTION F SOCIETIES AND ORGANISATIONS F.1-F.32

F.1-F.10	ANTI-LOCUST RESEARCH CENTRE (ALRC) later CENTRE FOR OVERSEAS PEST RESEARCH (COPR)
F.11	ASSOCIATION OF APPLIED BIOLOGISTS
F.12	COMMONWEALTH INSTITUTE OF ENTOMOLOGY
F.13	MINISTRY OF AGRICULTURE, FISHERIES AND FOOD
F.14	ROYAL ENTOMOLOGICAL SOCIETY OF LONDON
F.15-F.30	ROYAL SOCIETY
F.31	SOCIETY FOR EXPERIMENTAL BIOLOGY
F.32	“VERRALL” ASSOCIATION OF ENTOMOLOGISTS

Perhaps because of the primacy he accorded to research, Kennedy joined relatively few societies and organisations and kept his relations with them fairly firmly confined to professional matters of publications, discussions and meetings. Many of the papers in Section D were given at meetings of the organisations listed here.

The correspondence at F.1-F.10, though held by Kennedy under the name of the organisation Anti-Locust Research Centre, could be considered 'scientific correspondence' such as that for aphids (B.10-B.18).

Societies and organisations

ANTI-LOCUST RESEARCH CENTRE (ALRC), later CENTRE FOR OVERSEAS PEST RESEARCH (COPR)

- F.1-F.7 Contents of Kennedy's bulky folder labelled 'ALRC - Director'.
- Correspondence and papers 1937-1983, exchanged with successive Directors (B.P. Uvarov, T.H.C. Taylor, P.T. Haskell) and other members of the staff, on aspects of organisation, research projects, papers and publications by Kennedy and by others, visits, meetings, discussions and conferences.
- Much of Kennedy's early research and subsequent publications were on locusts. His major publication was 'The migration of the Desert Locust' (*Phil. Trans. R. Soc. Lond. B*, 235, 1951) but he continued his interest, notably in phase transformation, throughout his career.
- F.1 1937. One letter only, from Kennedy's Sudanese guide.
- 1945-1946. Includes draft report on aircraft spraying against desert locust after trials in Kenya (1945). See J.5-J.8.
- F.2 1947-1948.
- F.3 1949-1951.
- F.4 1952-1958. Publications and meetings.
- F.5 1960-1966. Meetings and discussions, comments on locust phase terminology and on papers.
- F.6 1967-1970. Secondment of J.E. Moorhouse to work at Silwood Park Imperial College (*q.q.v.*), Silver Jubilee of ALRC International Study Conference on Acridology.
- F.7 1971-1983. Reorganisation and change of name to Centre for Overseas Pest Research (COPR), Kennedy's invitation to join Panel of Consultants (1974), collaboration with ARC Unit at Silwood Park.
- F.8-F.10 Contents of Kennedy's folder labelled 'ALRC General'.
- Correspondence and papers 1951-1977, exchanged with staff members of ALRC/COPR and colleagues, including some reviews and discussions arising, comments on papers and drafts, notes of meetings, requests for information and reprints.
- There is some overlap with the material at F.1-F.7 above, but Kennedy's apportionment has been respected.

Societies and organisations

- F.8 1947-1957.
- F.9 1961-1969. Glossary of terms in desert locust research and control, comments on papers.
- F.10 1974-1977. Comments on papers, meetings and material arising.

ASSOCIATION OF APPLIED BIOLOGISTS

- F.11 Correspondence 1950-1970, on publications (in *Ann. appl. Biol.*) and meetings of the Association, includes invitation (declined) to accept nomination as President 1970.

COMMONWEALTH INSTITUTE OF ENTOMOLOGY

- F.12 Correspondence and papers 1954-1961, mainly relating to Seventh Commonwealth Entomological Conference July 1960 with drafts etc. for Kennedy's paper 'The behavioural fitness of aphids as field vectors of viruses' (*Rep. Seventh Commonw. ent. Conf. London December 1960*) and Kennedy's collaborative publication with M.F. Day and V.F. Eastop *A conspectus of aphids as vectors of plant viruses* 1962.

MINISTRY OF AGRICULTURE, FISHERIES AND FOOD

- F.13 Miscellaneous correspondence and papers. Includes comments on terminology of plant pathology 1950, Conference of advisory entomologists 1976 (Kennedy read his paper on pest control in USA, see C.4).

ROYAL ENTOMOLOGICAL SOCIETY

- F.14 Correspondence and papers 1970-1988 on affairs and publications of the Society; includes Kennedy's election as Honorary Fellow 1974, Centenary reception 1985.

ROYAL SOCIETY

General correspondence

- F.15 Miscellaneous shorter correspondence. Various dates 1971-1980.

Societies and organisations

British National Committee for Biology Subcommittee on Biological Control

The Subcommittee was set up in 1970 following an international meeting convened in Amsterdam 17-19 November 1969 by the International Union of Biological Sciences (IUBS). Kennedy was the Royal Society representative at the meeting, and served as Chairman of the Subcommittee until 1977.

Material includes correspondence and papers, notes of discussions and telephone calls, drafts etc. relating to the formation of the International Organisation for Biological Control (IOBC) and the West Palaeartic Regional Section.

- F.16 July 1969 - August 1970. Preliminary meetings at Royal Society and Amsterdam including Kennedy's notes and report, and official report, arrangements for Subcommittee's first meeting 11 March 1970 and for general discussion meeting 20 May 1970.
- F.17 September 1970 - August 1971. Subcommittee meeting 16 September, IUBS meeting October.
- F.18 1977-1980. Kennedy's resignation as Chairman (successor: F.G.H. Lupton), attendance at IOBC Assembly, Kyoto, August 1980 as Royal Society representative, including his notes and report.

Sectional Committee 7

Kennedy served 1980-1983, having declined an invitation in 1978 in order to pursue active research.

- F.19 1980-1983.

Elections

- | | | | |
|------|-----------|------|-----------|
| F.20 | 1968 | F.26 | 1978 |
| F.21 | 1969 | F.27 | 1980 |
| F.22 | 1971 | F.28 | 1981-1982 |
| F.23 | 1971-1972 | F.29 | 1985 |
| F.24 | 1973-1974 | F.30 | 1986-1987 |
| F.25 | 1974-1976 | | |

Societies and organisations

SOCIETY FOR EXPERIMENTAL BIOLOGY

- F.31 Annotated programme for SEB Fiftieth Anniversary Meeting Cambridge 1974, Kennedy's election to Honorary Membership 1991.

"VERRALL" ASSOCIATION OF ENTOMOLOGISTS

- F.32 Miscellaneous invitations to meetings, membership lists.

SECTION G CORRESPONDENCE G.1-G.245

- G.1-G.213 SCIENTIFIC AND GENERAL CORRESPONDENCE
- Correspondence with individuals and organisations, in alphabetical order, dated and indexed, with an indication of any information of particular biographical, scientific or historical interest.
- G.214-G.239 SHORTER SCIENTIFIC CORRESPONDENCE
- In alphabetical order, indexed.
- G.240-G.245 UNINDEXED CORRESPONDENCE
- In chronological order.

This extensive section provides in many ways the most informative and characteristic material of the whole collection. While remaining almost exclusively focussed on research into aspects of insect physiology and behaviour, many of the sequences are of considerable general and biographical interest.

One of the most obvious features of the material is the length and detail of many of the letters, particularly those by Kennedy himself; four, six or eight single-spaced foolscap pages are not uncommon. Towards the end of such a letter, Kennedy often explains that he has used the opportunity to 'think aloud' and clarify his own ideas as he wrote. Many (not all) of his correspondents would reply in kind, thus affording very detailed documentation of some point at issue. See G.174. In preparation for his replies, Kennedy might make manuscript notes or drafts, or add, in his fine pencilled hand, detailed comments in the margins of incoming letters, to which he might also append notes of telephone calls, conversations and contacts with others, action taken or proposed and the like. Thus, even if no reply survives, it is possible to reconstruct his views.

Correspondence

Though the tone of Kennedy's letters is almost invariably open and friendly, there is no doubt that his style could seem combative or hyper-critical. He claimed, no doubt with truth, that he welcomed straightforward criticism of his own work, and he expected others to share this feeling. Certainly the meticulous analysis he brought to bear on research data and findings, expression, and especially on terminology (particularly, as the years went by, of animal motivation and 'anthropomorphism') must have been testing to his correspondents. Occasionally, offence was taken, though apparently unintended, and a correspondence would be discontinued temporarily or permanently.

Many sequences, however, show Kennedy as both disinterested and unusually concerned to dispel misunderstandings and avoid offence. When he felt he must send an unfavourable referee's comment to a journal, he regularly sent a copy to the author (if personally known to him) to explain his reasons, often with detailed suggestions to assist in the re-casting of the work.

Of some biographical interest are the exchanges, some over a long time-span, with M. and N. Bates, D.L. Gunn, A. Milne and V.B. Wigglesworth. There are few political repercussions in these papers; the correspondence with D. Davenport shows Kennedy replying with dignity to shabby treatment; in 1975 he declined an invitation to examine a thesis from South Africa; correspondence with E.S. Sylvester (and elsewhere) refers to his being refused a US visa. Kennedy's perhaps delayed entry to the Royal Society is referred to in the brief correspondence with N. Tinbergen.

The 'Shorter scientific correspondence' at G.214-G.239 is shorter only in extent and time-span, consisting of but one or two exchanges. In content and tone it is similar to the main sequence in its concern for accurate definition of terms, careful scrutiny of drafts or papers, and reference to research in hand.

Correspondence

- G.10 1983-1985.
- G.11 1986-1987.
- G.12 1988-1990.
- G.13 **Banks, C.J.** 1958-1959
Research and publications on effects of ants on feeding and excretion of bean aphid.
- G.14 **Barton Browne, L.** 1966, 1972-1975
Visits and publications.
- G.15, G.16 **Bates, M. and Bates, N.** 1939-1966
Marston Bates (nicknamed in early letters 'Bastard') was an ecologist member of the International Health Division of the Rockefeller Foundation. He recruited Kennedy to work at the Foundation's Malaria Research Laboratory in Albania and worked with him at Tirana until the laboratory was closed down after the Italian occupation at Easter 1939. Kennedy left for England on 14 April. Bates and his wife Nancy stayed on into June to supervise the last stages of the work and safe removal of the staff's effects. The material contains Bates's last reports of the work of the laboratory April-May 1939, but is of interest for its biographical episodes, including wartime experiences, some political reflections, letters to the Bates from Kennedy's first wife Dorothy (nicknamed 'Toad') and a letter from him about their separation in 1942. There is also mention of the refusal of a US visa to Kennedy in 1964 which obliged him to cancel plans including a visit to the Bates.
- G.15 1939-1942.
- G.16 1945-1966.
- G.17 **Bateson, P.P.G.** 1970, 1987-1990
Correspondence 1970 on book review. Correspondence 1987-1992 on behaviourism, anthropomorphism, motivation, including notes for meetings and discussions, detailed comments and summaries of ideas and papers. Kennedy's letter of 6 October 1987 refers to his '35-year-long, one-man campaign against the anthropomorphism implicit in ethology'. In 1990 Bateson was asked by CUP to provide an assessment of Kennedy's proposed book *The new anthropomorphism*, and this led to further detailed discussions on the arguments of the book and on terminology; Kennedy's letter of 17 December 1991 gives some account of his intellectual development on the subject.

Correspondence

- G.32-G.35 **Cardé, R.T.** 1976-1991
- For the period of this correspondence, Cardé was working at the Universities of Michigan (1975-1981) and Massachusetts.
- Includes material on research and publications (mainly on pheromones), mutual visits, career and recommendations. A little personal and political material is included.
- G.32 1976-1979.
- G.33 1980-1983.
- G.34 1983-1986.
- G.35 1987-1991.
- G.36 **Carthy, J.D.** various dates 1951-1969
- Includes comments by Kennedy on publications by Carthy, and a letter 27 February 1964 on scientific priority on 'klinokinesis' and his unfortunate experience with D. Davenport (*q.v.*).
- G.37 **Casas, J.** 1986-1987
- Discussion and comments on Casas's work on 'leafminer parasitoids'.
- G.38 **Chambers, D.L. and others** 1975-1981
- Mainly on Kennedy's visit to Chambers's US Department of Agriculture Research Service Laboratory at Gainesville Florida as consultant (and his report on the laboratory) 1976, and visit by Chambers's colleague N.C. Leppla (*q.v.*) to Kennedy's laboratory 1977. See G.108. See also D.34
- G.39 **Chandler, A.E.F.** 1967-1971
- Mainly comments by Kennedy on paper by Chandler on syrphid larvae.
- G.40, G.41 **Chapman, R.F. and Bernays, E.A.** various dates 1970-1972
- Research at Anti-Locust Research Centre, reports on research, career and appointments.
- G.40 1970-1982.

Correspondence

- G.41 1983-1992.
- G.42 **Chiang, H.C.** 1955-1958, 1965
Includes Kennedy's notes on Chiang's work with him in Cambridge.
- G.43 **Choudhury, J.H.** 1976-1980, 1985
Choudhury was a doctoral student of Kennedy at Silwood Park, later returning to Bangladesh.

Material includes programme of work, funding difficulties, publication of joint paper on flight direction by bark beetles (*Physiol. Ent.* 5, 1980). See also E.7.
- G.44 **Clark, L.R.** 1950-1952, 1966-1970
- G.45 **Clements, A.N.** 1985-1992
- G.46 **Davenport, D.** 1958-1969
Correspondence on ethology and adaptation, klinokinesis.

Davenport and Kennedy envisaged joint work and publication and engaged in detailed and friendly correspondence (1959). In 1960, however, Davenport abruptly cancelled the plan and decided to publish with two American colleagues, on the grounds of Kennedy's 'admitted political affiliation'.

Kennedy always felt that he had been unjustly treated by Davenport and refers to the episode several times elsewhere in correspondence.
- G.47-G.49 **David, C.T. and others** 1969-1988
David was a doctoral student of Kennedy at Imperial College 1969-1972; after a period of work at the University of California at Berkeley, he rejoined the ARC Group at Silwood Park as a Research Assistant from January 1976, later Research Fellow.

Material includes notes and reports of various stages of doctoral and ARC work, grant applications and research reports, career and appointments.
- G.47 1969-1975.
- G.48 1976-1982.

Correspondence

- G.49 1983-1988.
- G.50 **Dawkins, M.S.** 1985-1991
Correspondence, memoranda and notes on motivation, including notes etc. on meetings in Zoology Department Oxford.
- G.51 **Dawkins, R.** 1980-1992
Includes correspondence 1982 on Dawkins's book *The Extended Phenotype* and press comment, manuscript note by Kennedy on 'Sociobiology and racialism'.
- G.52 **Dethier, V.G.** various dates 1951-1992
Research on aphids, motivation. Includes a little material on the Symposium to honour Dethier 1985, when Kennedy gave his paper on 'Animal motivation : the beginning of the end?' into which, he said 'I put everything I had' (letter of 8 June 1985); also some discussions on Kennedy's book.

For photographs taken at the Symposium, see J.30.
- G.53 **Dienske, H. and others** 1986-1987
Possible experiment on self-awareness in chimpanzees.
- G.54-G.57 **Dingle, H. and others** 1959-1990
Dingle worked for a year 1962-1963 with Kennedy in Cambridge, on a post-doctoral Fellowship from the US National Science Foundation, returning to appointments in US at the Universities of Michigan, Iowa and California at Davis, working mainly on insect migration.

Material includes notes and discussions on research, drafts and comments on papers by Dingle and by Kennedy, research programmes, grant applications and evaluations, career and appointments.
- G.54 1959-1963.
- G.55 1964-1965.
- G.56 1966-1969. Includes reference to Kennedy's move from Cambridge to Silwood Park, and the setting-up of ICIPE where Dingle spent 1969-1970.
- G.57 1970-1990.

Correspondence

- G.74 1937. Mainly notes and drafts for collaborative paper.
- G.75 1938-1939. Includes letters from Albania on work and conditions.
- G.76 1939-1946. Includes drafts and comments.
- G.77 1951-1978. Includes substantial comments by Kennedy on Gunn's commissioned article on locust control 1959 and letter May 1964 on his move from Cambridge.
- G.78 1980-1983.
- G.79 **Hardie, R.J.** 1982, 1987-1992
Research, publication, career. Includes draft manuscript by Hardie, annotated by Kennedy, on 'spectral sensitivity'.
- G.80 **Henson, W.R.** 1965
Design of flight chamber, recommendation.
- G.81 **Hille Ris Lambers, D.** various dates 1953-1974
Various factors in aphid research. Includes extensive comments (unfavourable) by Hille Ris Lambers on Kennedy's and H.L.G. Stroyan's review *Biology of aphids* and responses by Kennedy. Also comments on *Conspectus of aphids as vectors of plant viruses*, by Kennedy, M.F. Day and V.F. Eastop, 1962.
- G.82, G.83 **Hinde, R.A.** 1968-1992
- G.82 1968-1969. Research meetings and publications on animal behaviour. Includes some material on setting-up of MRC Unit on Behaviour at Cambridge. For a photograph of a meeting 1969, see J.27.
- G.83 1970-1992. Ethology, motivation, comments on work of Lorenz and Tinbergen, manuscript by Hinde on nuclear proliferation.
- G.84 **Hinton, H.E.** 1959-1977
Minor exchanges on various topics. Includes obituary tributes to Hinton after his death in 1977, by Kennedy and others, and recollections sent by Kennedy to G. Salt for his Royal Society Memoir of Hinton.

Correspondence

- G.93 1945-1952.
- G.94 1953-1955.
- G.95 1956-1963. Includes some disagreement about migration.
- G.96 1966-1973, 1983. Includes discussion of research programme at Rothamsted. Johnson's last letter, of July 1983, comments unfavourably on the election of Mrs (later Baroness) Thatcher to the Royal Society.
- G.97 **Jones, M.D.R.** 1964-1982
Research on 'chirping', excitation and inhibition, publications, career and appointments.
- G.98 **Kacelnik, A.** 1991-1992
Anthropomorphism, 'foraging', terminology.
- G.99 **Kay, R.H.** 1975-1979
Kay worked for an M.Sc. at Silwood Park under Kennedy's supervision.
Includes Kennedy's notes for Kay's research programme, career and appointments.
- G.100 **Kennedy, D.** 1963-1975
Discussion on excitation, inhibition, 'post-inhibitory rebound'. Also includes Kennedy's tribute to Donald M. Wilson, a colleague of D. Kennedy at Stanford, accidentally drowned 1970.
- G.101 **Key, K.L.H.** 1948-1953
'Phases' in locust swarming, terminology.
- G.102 **Keyserlingk, H.C. von** 1974-1984
Keyserlingk was an M.Sc. student of Kennedy at Imperial College, returning to the Free University Berlin from 1975.
Research on Dutch Elm beetle, career and appointments.

Correspondence

- G.110-G.112 **Ludlow, A.R.** 1971-1987
- Ludlow joined the ARC Insect Physiology Group at Silwood Park as an Experimental Officer in 1968, acting originally as research assistant to Kennedy, but developing a strong independent career especially in statistical and computational techniques. He and Kennedy published many collaborative papers 1974-1987.
- G.110 1971. Early work on inhibition. Drafts etc., annotated by Kennedy.
- G.111 1973-1975. Research programme, thesis and paper, annotated by Kennedy.
- G.112 1976-1987. Drafts, comments, Ph.D. arrangements, appointments.
- G.113 **McFarland, D.** 1985-1990
- Detailed notes, discussions and comments on drafts and publications by McFarland on motivation and anthropomorphism.
- G.114 **Madge, P.E.** 1954-1964
- Madge held a Postdoctoral Fellowship at Cambridge 1960-1961.
- Includes report on work.
- G.115 **Malcolm, S.** 1985-1986
- Migration.
- G.116 **Manning, A.W.G.** 1987-1989
- Motivation, rebound, reflexes.
- Correspondence 1987 refers to Manning's obituary of N. Tinbergen and Kennedy's contacts with him.
- G.117 **Marsh, D.** 1968-1978
- Marsh came to the ARC Group at Silwood Park in 1968 to work for a Ph.D. under A.D. Lees. He subsequently worked as a Research Assistant on an ARC grant under Kennedy's supervision, to 1976.
- Career and appointments.

Correspondence

- | | | |
|-------------|--|-------------------------|
| G.118 | Mamamosch, K. | 1959-1966 |
| | 'Friendly viruses', vectors. | |
| G.119 | Mattingley, P.F. | 1961-1968 |
| | Conferences. | |
| G.120 | May, R.M. | 1971-1972, 1984, 1987 |
| | Includes comments by May on Kennedy's paper 'Migration, behavioral and ecological', 1985. | |
| G.121 | Miles, P.W. | 1967-1970 |
| | Grants, research programmes, appointments. | |
| G.122 | Miller, J.R. | 1978-1982 |
| | Visits, publications. | |
| G.123 | Miller, P.L. | various dates 1967-1974 |
| | Comments on publications, reflex analysis. | |
| G.124-G.128 | Milne, A. and others | 1950-1969, 1982-1984 |
| | Milne worked at the ARC Unit of Insect Physiology, University of Durham School of Agriculture. | |
| | Includes some extensive, sometimes combative, exchanges and controversies on scientific theories, in particular on population dynamics and Milne's theory thereof, which he considered to have been misunderstood and inadequately recognised. | |
| | Some personal correspondence is also included. | |
| G.124 | 1950-1953. | |
| G.125 | 1958-1961. Detailed discussion on population dynamics and migration. | |
| G.126 | 1962-1963. Similar. | |
| G.127 | 1965-1969. Scientific polemics. Some autobiographical material. | |

Correspondence

- G.128 1982-1984. Similar.
- G.129 **Milthorpe, F.L.** 1957-1958
Notes, drafts, correspondence on seed maturity and other problems in potato research.
Includes comments by Milthorpe on draft paper by Kennedy on 'Water relations of leaves from woody and herbaceous plants' (*Nature*, **181**, 1958).
- G.130 **Minks, A.K.** 1976-1983
Research, visits, meetings, publications on insect pheromones.
- G.131 **Mittler, T.E. and others** 1950-1974
Kennedy was an examiner for Mittler's Ph.D. thesis at Cambridge (on aphid feeding).
Includes report on thesis, research plans, visits, publications, career and appointments.
- G.132 **Moericke, V.** 1951-1966, 1977-1978
Colour vision and host finding in aphids.
Kennedy's letter of 8 January 1959 discusses concepts of vitalism and materialism in biological research.
Moericke's letters usually in German.
- G.133 **Moore, I.** 1983-1986
Mainly detailed comments and suggestions by Kennedy on drafts of paper by Moore on pheromones.
- G.134-G.138 **Moorhouse, J.E. and others** 1965-1987
Moorhouse was working at the Anti-Locust Research Centre (*q.v.*) in London when Kennedy submitted a proposal for a period of part-time work at the Centre to enable him (Kennedy) to obtain technical experience for research in locust response to wind-borne odour. This developed into a long-term collaborative project and publications with Moorhouse.
After a period (1967-1969) in Australia, Moorhouse worked with the ARC Group at Silwood Park on secondment from the Overseas Development Administration (ODA) from 1970-1975, the maximum period allowed for

Correspondence

secondment. Thereafter he was 'on detached duty' 1975-1977 and then on attachment as a permanent replacement for Kennedy as 'officer-in-charge'. In 1987 he moved to Reading University.

- G.134 1965-1967. Includes Kennedy's proposal for part-time working at ALRC, correspondence, costings etc. for equipment at Silwood Park laboratory, outlines for papers.
- G.135 1968-1969. Includes comments by Kennedy on Moorhouse's thesis, and on draft papers.
- G.136 1970-1977. Moorhouse's secondment to ARC Group Silwood Park and renewals, administrative and financial arrangements, accommodation for research, plans and progress.
- G.137 Annual reports on project 1972-1976.
- G.138 Correspondence, research and publications 1981-1987.
- G.139 **Mound, L.A.** 1960
Colour sensitivity in aphids, with reference to the work of V. Moericke (*q.v.*).
- G.140 **Müller, H.J.** 1958-1960
Aphid alighting behaviour.
Müller's letters are in German.
- G.141 **Nakamuta, K.** 1986
Comments by Kennedy on paper by Nakamuta on 'area-concentrated search'.
- G.142 **Newth, D.R.** various dates 1961-1975
Incoming letters from Newth only.
Includes offer by Newth of research space at Glasgow for Kennedy's retirement.

Correspondence

- G.157, G.158 **Roper, T.J.** 1984-1988
- Mainly on post-inhibitory rebound and displacement activities, Kennedy's publication on the subject 'Displacement activities and post-inhibitory rebound' (*Anim. Behav.*) **33**, 1985 including referees' comments, ethological theories.
- G.157 1984-1985.
- G.158 1986-1988.
- G.159 **Rothschild, M.L.** 1969, 1978, 1985
- Brief correspondence only.
- G.160 **Sabelis, M.W.** 1984
- 'Searching' and 'foraging' strategies.
- G.161, G.162 **Sanders, C.J.** 1976-1982
- Sanders, a Canadian forest entomologist, worked with Kennedy at Silwood Park September 1977 - September 1978.
- Correspondence, notes, data, drafts etc. for two collaborative papers, published 1981 and 1982, on guidance systems for pheromone orientation in moths.
- G.161 1976-1979.
- G.162 1980-1982
- G.163 **Schaef, G.,W.** and others various dates 1969-1979
- Radar studies of locust migration and pest control.
- G.164 **Schneider, D.** 1977-1981
- Schneider's letter of 28 October 1977 refers to Kennedy's acceptance of membership of the Advisory Group at Max-Planck Institute of Invertebrate Physiology, Seewiesen; Kennedy's notes taken at meeting of Advisory Group November 1977 are included. He resigned from ill-health in 1979.

Correspondence

- G.201 1963-1967. Correspondence and memos on dissolution of the ARC Unit and relocation of personnel, negotiations for Kennedy's future and his anxieties on the subject.
- G.202 1966, 1967. Miscellaneous material, guest-lists, correspondence etc. for events to mark Wigglesworth's retirement: 'Top Floor' (at Department of Zoology) party July 1966, informal dinner (at Kennedy's home) September 1967. Includes Kennedy's notes for toast.
- G.203 1967-1986. Miscellaneous later correspondence, ICIPE affairs, biographical notes by Kennedy on Wigglesworth 1976, 'Some Memories' of Wigglesworth published in *The Caian* 1979, a little personal correspondence.
- G.204 **Wiktelius, C.T.** 1976-1980
Wiktelius, a Swedish aphidologist, visited and worked at Silwood Park March-April 1980 on a Royal Society European Scientific Exchange.
- G.205, G.206 **Wilde, J. de and others** 1958-1987
Wilde, a Dutch entomologist working at Wageningen, was a long-term friend of Kennedy from their first meeting in 1948.
Correspondence on visits and conferences especially information and notes on June 1969 symposium on 'Insect and Hostplant', research student at Silwood Park 1977, Kennedy's delivery of the first Jan de Wilde Lecture (on animal motivation) 1986. See J.31 for photographs of the lecture.
- G.205 1958-1969.
- G.206 1976-1987.
- G.207 **Williams, C.B.** 1940, 1961
Two letters only, by Williams. No surviving reply by Kennedy.
Williams had been one of Kennedy's examiners for his Ph.D. The other was P.A. Buxton (*q.v.*) who, as Kennedy records in his biographical notes (A.1) showed him in confidence a parody by Williams of the 'faricically Behaviourist style' of his thesis. Kennedy was wounded by this, but his later writing became clear even when polemical or combative.

Correspondence

G.219	Di - Du
G.220	E
G.221	Ga - Ge
G.222	Go - Gr
G.223	Ha
G.224	He - Hu
G.225	I, K
G.226	La - Li
G.227	Lo
G.228	M
G.229	N
G.230	O
G.231	P
G.232	R
G.233	Sa - Sch
G.234	Sco - Si
G.235	Sn - Sw
G.236	V, Wa

Correspondence

- G.237 We - Wi, Y
- G.238 Unidentified or first-name signatures.
- G.239 Requests to visit or work in Kennedy's laboratory, thanks for hospitality etc. 1952-1967, ie. during Kennedy's period at University Field Station Cambridge. See C.14-C.16 for similar requests at Silwood Park and Oxford.
- In chronological order.

UNINDEXED CORRESPONDENCE

- G.240-G.245 Requests and/or thanks for reprints, information, samples of material or specimens, permission to quote or reproduce material, figures etc. received or sent by Kennedy. A little discussion of research proposed or in hand is sometimes included.
- In chronological order.
- G.240 1937-1939.
- G.241 1940-1949.
- G.242 1950-1959.
- G.243 1960-1969.
- G.244 1970-1979.
- G.245 1980-1989.

SECTION H

REFERENCES AND RECOMMENDATIONS

H.1-H.136

H.1, H.2 THESES AND HIGHER DEGREES

H.3-H.39 UK RESEARCH GRANTS AND FELLOWSHIPS

H.40-H.51 OVERSEAS RESEARCH AND TRAVEL GRANTS

H.52-H.81 UK APPOINTMENTS, PROMOTIONS, AWARDS

H.82-H.97 OVERSEAS APPOINTMENTS, PROMOTIONS, AWARDS

H.98-H.136 EDITORIAL AND ADVISORY

References and Recommendations

THESES AND HIGHER DEGREES

H.1 1969-1970.

H.2 1976-1986

UK RESEARCH GRANTS AND FELLOWSHIPS

Agricultural Research Council / Agricultural and Food Research Council

H.3 1970-1974.

H.4 1976-1977.

H.5 1981.

H.6 1982.

H.7 1984.

Linnean Society (Percy Sladen Memorial Fund)

H.8 1979.

University of London

H.9 1970.

1976.

Medical Research Council

Much of this material relates to the work of the Tropical Medicine Research Board, and grants made by the Board for ongoing research, based at Sussex University, on mosquito behaviour and vectors of malaria.

H.10 1967-1970.

References and Recommendations

- H.11 1972.
- H.12 1972-1974. MRC Programme on mosquito behaviour. Subcommittee visit to Sussex University 11 January 1973. Invitation, report, brief correspondence arising.
- H.13 1974. Material on implementation of the report of the Board's Working Party on the anopheline vectors of malaria.
- H.14 1975.
- H.15 1976.
- H.16 1977.

Ministry of Overseas Development

- H.17 1969.
- H.18 1977.

Natural Environment Research Council

- H.19 1973-1974.

Nuffield Foundation

- H.20 1974.

Royal Society

- H.21 1970-1975.
- H.22 1976-1981.
- H.23 1982.
- H.24 1984-1991.

References and Recommendations

Science Research Council / Science and Engineering Research Council

The material may refer to renewals or extensions of existing grants as well as to new applications. It is presented in chronological order.

- | | |
|------|-------------|
| H.25 | 1970. |
| H.26 | 1971-1973. |
| H.27 | 1975. |
| H.28 | 1976. |
| H.29 | 1977. |
| H.30 | 1978. |
| H.31 | 1979 (1). |
| H.32 | 1979 (2). |
| H.33 | 1980. |
| H.34 | 1981. |
| H.35 | 1982. |
| H.36 | 1984, 1988. |

Tropical Development and Research Institute

- | | |
|------|-------|
| H.37 | 1986. |
|------|-------|

Wellcome Trust

- | | |
|------|-------|
| H.38 | 1982. |
|------|-------|

References and Recommendations

Unidentified

H.39 1968.

OVERSEAS RESEARCH AND TRAVEL GRANTS

Australia

H.40 Australian Research Council Research Grants Committee 1969, 1971.

H.41 Australian Research Council Research Grants Committee 1991.

H.42 La Trobe University 1978.

University of California, Riverside

H.43 1987.

Eire

H.44 National Science Council 1977.

National Science Foundation, Washington DC

H.45 1962.

H.46 1963.

H.47 1964, 1966.

H.48 1968.

H.49 1976.

References and Recommendations

Switzerland

H.50 Swiss National Science Foundation 1979.

H.51 Swiss National Science Foundation 1987.

UK APPOINTMENTS, PROMOTIONS, AWARDS

Universities and institutions

H.52 Birmingham 1973-1974.

H.53 Cambridge 1959-1961.

H.54 Cambridge 1976-1978.

H.55 Hull 1969-1970.

H.56 Keele 1979.

H.57 Leicester 1964.

H.58 London, Royal Holloway 1974, 1977.

H.59 Rothamsted Experimental Station 1969.

H.60 St. Andrews 1988.

H.61 Sunderland Polytechnic 1986.

H.62 Zoological Society of London 1971-1975.

Civil Service and government institutions

H.63 Cabinet Office 1987.

References and Recommendations

- H.64 Civil Service Commission 1970.
- H.65 Civil Service Commission 1971.
- H.66 Natural Environment Research Council 1967.
- H.67 Overseas Development Natural Resources Institute 1988.
- H.68 Scottish Office Establishment Division 1970.

Personal references

These are Kennedy's references for candidates, some supplied at their own request, for academic and other appointments. Some may extend over several years and may include correspondence on research and careers, and updating of previous recommendations. 1957-1989.

- H.69 B (1974-1989).
- H.70 B, C (1975, 1967).
- H.71 F (1974-1978).
- H.72 H (1968, 1970, 1973).
- H.73 L (1957-1958).
- H.74 M (1979-1980).
- H.75 N, P (1979, 1963-1968).
- H.76 R, Sa (1966-1967).
- H.77 S (1982-1983).
- H.78 Su, T (1970, 1973).
- H.79 T, W (1975, 1976).

References and Recommendations

H.80 Unidentified (1970).

H.81 Requests to read or advise on manuscripts 1969-1975.

OVERSEAS APPOINTMENTS, PROMOTIONS, AWARDS

Australia

H.82 CSIRO 1966.

H.83 Melbourne 1967.

H.84 CSIRO 1980.

Ghana

H.85 1972.

Kenya

H.86 Nairobi 1968-1969.

Sudan

H.87 Khartoum 1975.

Switzerland

H.88 Basle University 1981, 1982.

Tasmania

H.89 University of Tasmania 1971, 1972.

References and Recommendations

United States

H.90 University of California, Berkeley 1966.

H.91 University of California, Berkeley 1973.

H.92 Harvard.

H.93 Michigan State 1987, 1990.

H.94 University of Texas, Austin 1988.

Western Ontario

H.95 McMaster University 1966, University of Western Ontario 1969.

Zambia

H.96 University of Zambia 1969.

Requests declined

H.97 1971-1987.

EDITORIAL AND ADVISORY

The material, in alphabetical order, consists of correspondence and papers exchanged with editors, authors and publishing houses. Some are relatively brief in date and scope, others cover a long period and may concern matters of publishing policy as well as advice on books or papers submitted for publication.

A little material relates to Kennedy's own publications, or to requests (almost always unsuccessful) for him to write books or papers, but the majority concerns work submitted by others. Like the general correspondence, it testifies to the meticulous care Kennedy regularly lavished to ensure production of accurate work of scientific value; there are many expressions of gratitude from authors and editors acknowledging the trouble he took.

References and Recommendations

Specialist journals with which Kennedy had a long connection as contributor, editor or consultant include *Animal Behaviour*, *Journal of chemical Ecology* and *Physiological Entomology*. He also refereed regularly for *Nature*.

- H.98 Academic Press 1983

Advice on proposed publication.
- H.99-H.105 *Animal Behaviour* 1954-1985
 formerly *British Journal of Animal Behaviour*

Correspondence with successive editors and secretaries. Includes invitation February 1962 to Kennedy to join the editorial panel of the journal.
- | | | | |
|-------|-----------|-------|------------------|
| H.99 | 1954-1961 | H.103 | 1967-1968 |
| H.100 | 1962 | H.104 | 1969, 1971-1974 |
| H.101 | 1963-1964 | H.105 | 1980, 1981, 1985 |
| H.102 | 1965-1966 | | |
- H.106 *Annals of Applied Biology* 1959, 1971.

Correspondence 1959 includes Kennedy's review for the journal of J.D. Carthy's *An introduction to the behaviour of invertebrates* (not listed in Bibliography).
- H.107 *Behavioural Ecology and Sociobiology* 1980.

Detailed comments on paper submitted.
- H.108 *Bulletin of Entomological Research* 1970, 1971.

Comments on papers submitted.
- H.109 Chapman & Hall 1984.

Comment on proposed book.
- H.110 *Entomologia experimentalis et applicata* 1976-1983.

Comments on papers submitted.

References and Recommendations

- H.111 *Environmental Entomology* 1986.
Comment on paper.
- H.112 *Journal of Animal Ecology* 1963, 1968.
Correspondence 1963 relates to Kennedy's review of W.H. Thorpe's *Learning and instinct in animals* (not listed in Bibliography).
- H.113 *Journal of applied Ecology* 1973.
Comment on paper.
- H.114-H.118 *Journal of chemical Ecology* 1976-1989.
The Journal was founded in 1975. Kennedy was invited to join the Editorial Board in March 1976 and served until 1988.
The correspondence is mainly with R.M. Silverstein, joint editor with J.B. Simeone, and includes Kennedy's detailed comments on papers submitted and some personal correspondence on research, visits etc.
- H.114 1976-1978.
- H.115 1979-1980.
- H.116 1981. Includes correspondence etc. on paper by Kennedy and others, *A re-appraisal of insect flight towards a distant point source of wind-borne odour*, published in the journal (**8**, 1982).
- H.117 1982.
- H.118 1983-1989.
- H.119 *Journal of Entomology* 1970-1973.
Comments on papers.
- H.120 *Journal of experimental Biology* 1953-1957.
Comments on papers.

References and Recommendations

- H.121 *Journal of Insect Physiology* 1980, 1983.
Comments on papers.
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- H.126 1974.
- H.127 1975-1977. Includes arrangements for visit of editorial staff of *Nature* to Silwood Park August 1976, Kennedy's review of B.P. Uvarov: *Grasshoppers and Locusts* 1977.
- H.128 1978-1980. Includes Kennedy's review of R.W. and J.R. Matthews: *Insect Behaviour* 1978 and material relating to collaborative paper *Guidance system used in moth sex attraction* (288, 1980).
- H.129 1983-1987. Includes material relating to collaborative paper *Finding of a sex pheromone source by gypsy moths released in the field* (303, 1983) with referees' comments and authors' reply.
- H.130 *Penguin Science News* 1956.
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- H.131 *Pesticide Science* 1977
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- H.132 *Physiological Entomology* 1982-1992.
Comments on papers.
- H.133 Royal Society 1974, 1976, 1980.
Comments on papers submitted for the Society's publications.
- H.134 *Tropical Pest Management* n.d.
Comments on paper.
- H.135 Wiley & Sons Limited 1980.
Brief correspondence only.
- H.136 Miscellaneous comments and reviews of papers, for unidentified
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SECTION J

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J.1-J.8 Middle East Anti-Locust Unit

**J.9 Chemical Defence Experimental Station,
Porton down**

J.10-J.17 Cambridge University

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CONFERENCES, MEETINGS, GROUPS

J.33-J.35

PERSONAL / INDIVIDUAL

Photographs

RESEARCH

Middle East Anti-Locust Unit

These complement the documents at B.33-B.35. Some are official RAF photographs, others taken by Kennedy or possibly by other members of the team. A few bear comments or identifications by Kennedy on the verso.

- J.1 Oman. RAF photographs. Some dated December 1942, January 1943. A few with comments by Kennedy.
- J.2 Middle East, including Muscat and other desert townships. RAF photographs, and one by Kennedy. December 1942. A few with comments by Kennedy.
- J.3 Middle East desert landscapes. RAF photographs. December 1942. A few with identifications by Kennedy.
- J.4 Four enlargements, Middle East.
- J.5 Work in East Africa, Kenya, Sudan, Uganda 1944. Aircraft and spraying. RAF photographs.
- J.6 East Africa. Locust swarms, sites for experiments and location of apparatus. RAF photographs and some probably by Kennedy. Several identifications and comments on verso.
- J.7 RAF personnel, experiments, apparatus, observations and recordings in progress, workers wearing protective clothing, a few informal photographs. RAF photographs and a few probably by Kennedy.
- J.8 Official photographs of work of the Anti-locust flight, with descriptions on verso.

Chemical Defence Experimental Station, Porton Down.

- J.9 Envelope of photographs of 'locusts "flying" on the roundabout, Porton 1945'.
- Kennedy worked at Porton Down, for a relatively brief period 1945-1946 before moving to Cambridge.

Photographs

Cambridge University

Work at the University Farm 1947. See also B.3

J.10-J.17 8 Envelopes of 'Brook Field Photos', some by RAF, some by Kennedy, August 1947.

Windtunnel

J.18 Miscellaneous photographs of Kennedy's windtunnel apparatus n.d.

J.19 Photographs of windtunnel apparatus designed by W.L. Roeloff, sent to Kennedy May 1976 (see G.156).

Blackcurrant mite

J.20 Photographs of research by J.M. Thresh sent to Kennedy September 1964 (see G.183).

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J.21 8th International Congress of Entomology, Stockholm, 1948.

J.22 Symposium on insect populations, Harpenden, September 1952 (with key).

J.23 Symposium 'Insect and Food-Plant', Wageningen, 27 May 1957.

J.24 Symposium in Prague, 1959.

J.25 Department of Zoology, Cambridge, 1959.

J.26 Association of Applied Biologists meeting, Edinburgh, 12 September 1962.

J.27 Meeting at King's College, Cambridge, July 1969. See G.82.

J.28 Meeting at Bellagio, Como, 10 April 1975 (identifications on verso).

Photographs

- J.29 Conference on 'Mechanisms of Perception and Orientation to Insect Olfactory Signals', Lady Margaret Hall, Oxford, 5-10 August 1984 (with key).
- J.30 Photographs (informal) taken at Symposium to honour V.G. Dethier, 1985. See G.52, D.39.
- J.31 Meeting at Wageningen, 1 May 1986, at which Kennedy delivered the first Jan de Wilde Memorial Lecture (identifications on verso). See G.206.
- J.32 Colleagues at unidentified conference (identifications on verso).

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- J.33 Photographs of Kennedy, at a conference, with windtunnel also illustrated at J.18, and with colleagues and apparatus (one dated Cambridge January 1966, one dated November 1967).
- J.34 Portrait photographs of V.B. Wigglesworth.
- J.35 Two photographs at Silwood Park, early 1970s, of J.E. Moorhouse and of J. Ions (technician), both in laboratory by windtunnel. Identification kindly made by C. Kennedy.

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