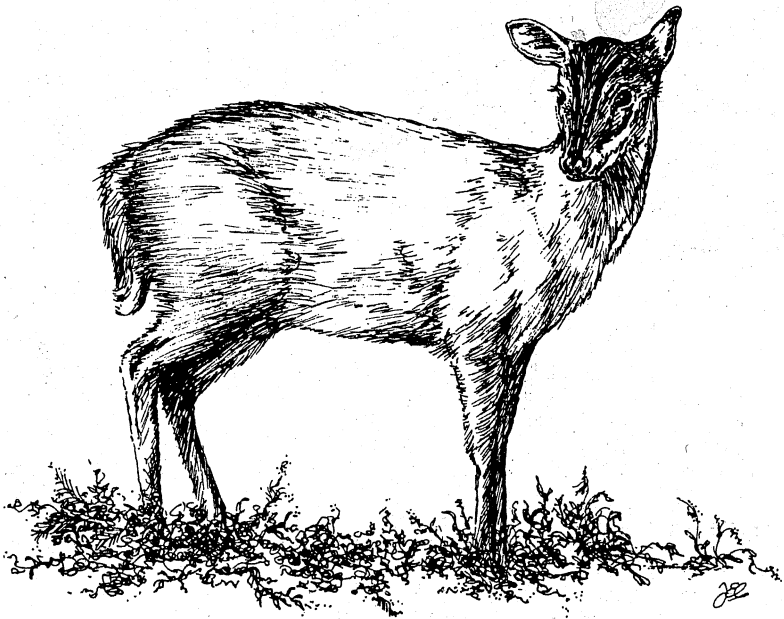


The Bedfordshire Naturalist 42



Journal
for the year 1987

Bedfordshire Natural History Society 1988
ISSN 0951-8959

BEDFORDSHIRE NATURAL HISTORY SOCIETY 1988

Chairman:

Mr D.G. Rands, 51 Wychwood Avenue, Luton LU2 7HT

Honorary Secretary:

Mr M.C. Williams, 2 Ivel Close, Barton-le-Clay, Bedford MK45 4NT

Honorary Treasurer:

Mr R.A. Johnson, 42 Kingsbury Avenue, Dunstable, Beds LU5 4PU

Honorary Editor (*Bedfordshire Naturalist*):

Mr C.R. Boon, 7 Duck End Lane, Maulden, Bedford MK45 2DL

Honorary Membership Secretary and Librarian:

Mr R.B. Stephenson, 9 Aspen Avenue, Putnoe, Bedford MK41 8BX

Honorary Scientific Committee Secretary:

Miss R.A. Brind, 46 Mallard Hill, Bedford MK41 7QS

Council (in addition to the above):

Ms C.A. Aldridge
Dr D. Allen
Mr V.W. Arnold

Mr C. Baker
Mr S. Cham
Miss A. Day
Mr D. Green

Mr A.J. Martin
Mr A.R. Outen
Mr H.R. Winter

Honorary Editor (*Muntjac*):

Mrs B. Chandler, 19 Hillside Close, Shillington, Hitchin, Herts SG5 3NN

Committees appointed by Council:

Finance: Miss R. Brind, Mr D. Green, Mr R. Johnson (Sec.), Mr D. Rands, Mr B. Stephenson, Mr M. Williams

Scientific: Mr D. Anderson, Mr C. Boon, Miss R. Brind (Sec.), Mr S. Cham, Miss A. Day, Mr G. Dennis, Mr J. Knowles, Mr D. Kramer, Mr A. Livett, Dr B. Nau, Mr B. Nightingale, Mr P. Trodd.

Membership: Mr J. Adams, Mr A. Aldhous, Dr D. Allen, Mr V. Arnold, Mr J. Burchmore, Mrs B. Chandler, Mr M. Chandler, Miss J. Childs, Mr P. Clarke, Miss B. Clutton, Mr W. Drayton, Mr S. Halton, Mr A. Martin, Mr D. Rands, Mrs M. Sheridan, Mr B. Stephenson (Sec.), Mr P. Symonds, Mr H. Winter.

Programme: Mrs B. Chandler, Mr D. Green, Mr S. Halton, Mrs B. Rands, Mr D. Rands, Mrs M. Sheridan.

Trustees (appointed under Rule 13): Mr M. Chandler, Mr D. Green, Mrs B. Rands.

THE BEDFORDSHIRE NATURALIST

No. 42 (1987)

Edited by C.R. Boon

CONTENTS

Officers of the Society	cover ii
Report of the Council	2
Proceedings	3
Report of the Treasurer	5
Statement of Accounts	6
Meteorology — Report of the Recorder	7
Geology and Palaeontology — Report of the Recorder	9
Mammals — Report of the Recorder	11
Muntjac Deer (<i>Muntiacus reevesi</i>) — the early years — D. Anderson and S.A. Cham	14
Birds — Report of the Recorder	19
Birds new to Bedfordshire (1987)	
Green-winged Teal — M.J. Palmer	45
Blue-winged Teal — P. Trodd	45
Arctic Skua — D. Ball	46
Bluethroat — M.P. and P.B. Hickey	47
Sabine's Gull — B. Nightingale	48
Spoonbills in Bedfordshire — P. Trodd	49
Bird Ringing Report — Report of the Co-ordinator	49
Study of Mandarin (<i>Aix galericulata</i>) in Bedfordshire — P. Fuller	51
Reptiles and Amphibians — Report of the Recorder	55
Slugs and Snails — Report of the Recorder	55
Bugs — Report of the Recorder	56
Dragonflies — Report of the Recorder	57
<i>Ischnura pumilio</i> (Scarce Blue-tailed Damselfly) in Bedfordshire — J. Comont	59
Lacewing Flies — Report of the Recorder	60
Butterflies — Report of the Recorder	62
Bumble-bees — Report of the Recorder	63
Some beetle and other records — B.S. Nau	64
Macro-moths — Report of the Recorder	65
Micro-moths — Report of the Recorder	67
Flowering Plants, Ferns and Fern Allies — Report of the Recorder	69
Mosses and Liverworts — Report of the Recorder	70
Lichens — Report of the Recorder	71
The Fungus Foray, 1987 — D.A. Reid	71
Recorders	cover iii
The Society	cover iii
Tetrad map of Bedfordshire	cover iv

Front Cover: *Muntjac Deer* (Joan Childs)

The Society would like to thank Bedfordshire County Council for a grant towards the publication of this Journal.

REPORT OF THE COUNCIL

The Council is pleased to report that although the membership has remained about the same as last year the Society has continued to develop and make progress. We attained yet another milestone in our distinguished history with the publication in the autumn of *Bedfordshire Wildlife*. Although the Society has several publications to its credit this is the first attempt to give an outline of the whole spectrum of natural history within the county. Its success can be measured not only by the numerous excellent reviews and praise that it has received but we are pleased to report that the sales are going well. Although many members have made a contribution to the book either indirectly by submitting records to the Society or directly by contributing to the text, providing photographs, drawings or maps, much of the praise must be given to Dr B.S. Nau, Mr C.R. Boon, and Mr J.P. Knowles who, as the Book Working Party, have put in countless hours of hard work and have finally steered the project to its successful conclusion. It will doubtless form a most useful resource for naturalists in the future.

The *Bedfordshire Naturalist* took on a new look with a more modern design for its cover and the *Bird Report* was also available separately as a reprint.

Indoor meetings have continued to cover a wide range of interest and have included talks on such diverse subjects as plant galls, hoverflies, hothouse animals, butterflies and moths, mammals, birds, flowers and photography. Some of these meetings were followed up by field meetings on the same topics. During the year there were 20 indoor meetings, 27 local field trips as well as trips to Anglesey, Yorkshire, Norfolk and Bernwood Forest. In addition the now almost traditional all-night meeting and barbecue at Maulden Wood and the one-day course at Shuttleworth both proved to be as successful as ever.

Despite valiant efforts inflation again caught up with us and at a Special General Meeting held in October it was decided to increase the subscriptions. It may be said that very few expenses are claimed by the officers and this in itself saves the Society a considerable amount of money. During the year we invested in some new display boards and these have been well utilised in publicising the Society and its activities throughout the county.

We are lucky in having amongst our members such a large number of dedicated experts in different fields of natural history who serve the society as its recorders and the Council would like to pass on its thanks to them and to all those involved in organising meetings, courses and field trips, to Brenda Chandler for editing *The Muntjac* and to Chris Boon, the editor of the *Bedfordshire Naturalist*. The Council wishes to pass on its sincere gratitude to Mike Chandler, Mary Sheridan and David Kramer who, after holding the positions of Treasurer, Minutes Secretary and Secretary respectively, will be retiring this year.

DAVID KRAMER

	1984	1985	1986	1987
Ordinary Members	348	351	375	378
Associate Members	62	63	62	55
Student Members	17	14	14	15
Corporate Members	11	10	7	9
Life Members	5	5	5	4
Honorary Life Members	4	4	2	2
	447	447	465	463

Table: Membership of the Society over the last four years.

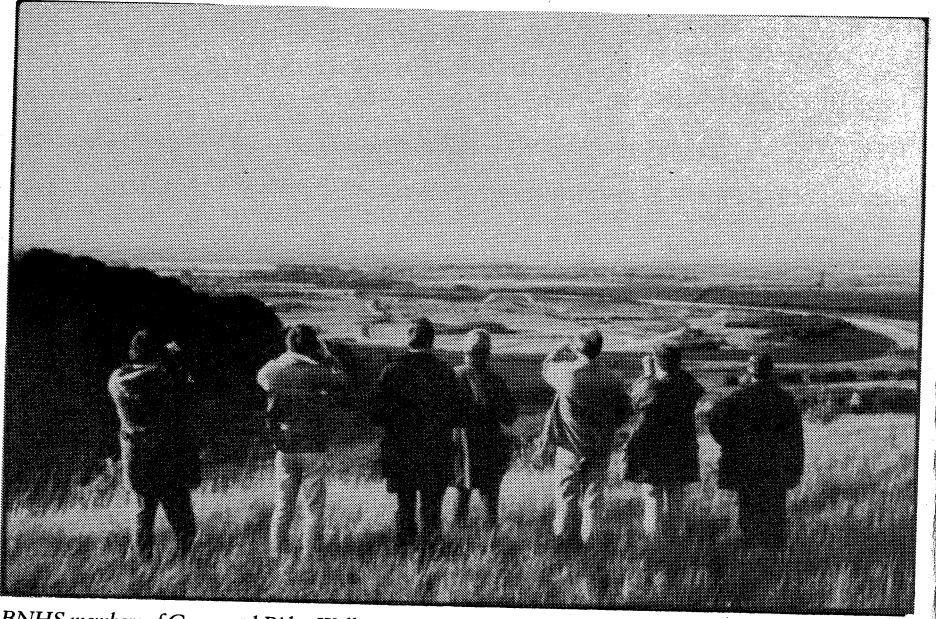
PROCEEDINGS

Indoor Meetings

- 559th Ordinary Meeting** 8th January, Bedford. "The British newts" by Mrs H. Muir-Howie.
Chair: Miss R. Brind.
- 560th Ordinary Meeting** 13th January, Dunstable. Chairman's evening. "The Fascination of small flowers" by Mr D. Rands.
- 561st Ordinary Meeting** 20th January, Ampthill. Twitchers' evening. Chair: Mr B. Nightingale.
- 562nd Ordinary Meeting** 28th January, Leagrave. Members' evening. Chair: Mr H. Winter.
- 563rd Ordinary Meeting** 4th February, Bedford. "Scotch Mist" by Mr R. Revels, Mr J. Green and Mr M. Demidecki. Chair: Mr D. Kramer.
- 564th Ordinary Meeting** 10th February, Dunstable. "A wildlife photographer's year" by Mr E. Janes. Chair: Mr D. Green.
- 565th Ordinary Meeting** 25th February, Leagrave. "Natural design" by Dr B. Nau.
Chair: Mrs B. Rands.
- 566th Ordinary Meeting** 5th March, Bedford. "Wildlife from a signal box" by Mr A. Brackenbury. Chair: Mr D. Rands.
- 567th Ordinary Meeting** 10th March, Dunstable. Members' evening. Chair: Mrs M. Sheridan.
- 568th Ordinary Meeting** 18th March, Ampthill. "The birds of Priory Park, Bedford" by Mr D. Kramer. Chair: Mr J. Knowles.
- Annual General Meeting** 26th March, Flitwick.
- 569th Ordinary Meeting** 7th October, Bedford. "Introduction to plant galls" by Mrs B. Rands.
Chair: Mrs B. Chandler.
- 570th Ordinary Meeting** 20th October, Dunstable. "Bramingham Wood, Luton — then and now" by Mr P. Symonds. Chair: Mr S. Cham.
- Special General Meeting** 29th October, Flitwick. To discuss subscription rates for 1988.
- 571st Ordinary Meeting** 29th October, Flitwick. "The fascination of small flowers" by Mr D. Rands. Chairman's evening introduced by Mr C. Boon.
- 572nd Ordinary Meeting** 5th November, Bedford. Members' evening. Chair Mr. R. Stephenson.
- 573rd Ordinary Meeting** 17th November, Dunstable. "Ten years of mammal recording in Bedfordshire" by Mr D. Anderson. Chair: Mr S. Halton.
- 574th Ordinary Meeting** 25th November, Leagrave. "Strangers in our land" by Mr D. Cottridge.
Chair: Mr D. Kramer.
- 575th Ordinary Meeting** 2nd December, Bedford. "Bedfordshire wildlife" by Mr D. Rands.
Chair: Mr J. Knowles.
- 576th Ordinary Meeting** 9th December, Ampthill. "The world of wildfowl" by Mr W. Drayton.
Chair: Mr M. Chandler.
- 577th Ordinary Meeting** 15th December, Dunstable. Members' evening. Chair: Mr D. Green.

Field Meetings

- Woburn Park** 8th February. A walk along the public footpaths of the park. Leader: Mr J. Knowles.
- Bedford Museum** 19th February. A visit to see how a museum works. Leader: Miss R. Brind.
- East Norfolk** 1st March. Birdwatching. Leaders: Mr B. Harding and Mr D. Green.
- Maulden Wood** 8th March. To study trees in winter. Leader: Mr D. Rands.
- Blows Downs** 19th April. To watch spring migrants. Leader: Mr P. Trodd.
- Harrod/Odell Country Park** 26th April. General natural history. Leader: Mr D. Rands.
- Barton Hills** 3rd May. 4th annual Pasqueflower count. Leader: Mr D. Rands.
- Maulden Wood** 10th May. Dawn chorus. Leader: Mr P. Trodd.
- Norfolk Coast** 17th May. Birdwatching. Leader: Mr D. Green.
- Sundon Country Park** 30th May. Flora of a chalk quarry. Leader: Mr C. Boon.
- Greensand Ridge Walk** 3rd June. Section of GRW from Ampthill. Leader: Mr J. Knowles.
- Potton Wood** 9th June. To listen for nightingales and other evening noises. Leader: Mr J. Green.



BNHS members of Greensand Ridge Walk, near Milbrook, 3.6.87.

(Photo: Chris Boon)



Botanists go everywhere! John Dony on M1 verge, between Junctions 12 and 13, 30.8.87

(Photo: Chris Boon)

- Maulden Wood** 13th-14th June. Annual all-night meeting and barbecue. By kind permission of the Forestry Commission. Organiser: Mrs B. Rands.
- Yorkshire** 19th-21st June. Annual weekend trip. Leader: Mr V. Arnold.
- Aspley Heath** 26th June. To look for "Birds of the night". Leader: Mr P. Smith.
- Sewell Cutting** 28th June. General natural history. Leader: Mr A. Martin.
- Pitstone Fen NR, Bucks** 1st July. General natural history. Leader, Mr G. Atkins.
- Flitwick Moor** 3rd July. Moth trapping. Leader: Mr V. Arnold.
- Wood End, Cople** 9th July. Bedfordshire's first Link Farm. To see how modern farming can be combined with landscape and wildlife. Leader: Mr R. Watts.
- Totternhoe Knolls NR** 15th July. To see chalk flowers and conservation measures.
Leader: Mr. S. Halton.
- Bernwood Forest, Oxfordshire** 19th July. General natural history. Leader: Mr J. Zorzi.
- Sharnbrook Summit** 9th August. General natural history. Leader: Mrs H. Muir-Howie.
- Priory Country Park, Bedford** 16th August. To study plants and insect life.
Leader: Miss R. Brind.
- Dunstable Sewage Works** 26th August. Birdwatching. Leader: Mr W. Drayton.
- Shuttleworth Agricultural College** 6th September. One day course on a variety of natural history subjects. By kind permission of the Principal. Organiser: Mrs B. Rands.
- Maulden Wood** 20th September. Small mammal trapping. Leader: Mr D. Rands.
- Bramingham Wood, Luton** 27th September. Introduction to fungus forays.
Leader: Mr T. Rhodes.
- Bedfordshire** 3rd or 4th October. Annual "Mammal-thon". Teams to look for the most number of mammals in a day. Organiser: Mr D. Anderson.
- Maulden Wood** 11th October. To look for plant galls. Leader: Mrs B. Rands.
- Rowney Warren, nr Shefford** 25th October. Annual Fungus Foray. Joint meeting with the Mycological Society. Leader: Dr. D. Reid.
- Anglesey** 6th-8th November. Birdwatching. Leader: Mr D. Green.

REPORT OF THE TREASURER

There was a large loss on the Current Accounts of £678. The subscription income remained at the same level as 1986 but our costs generally increased, because of this an increase in the rate of subscription was agreed at a Special General Meeting in October. Some £290 of this loss was the cost of new application forms for membership of the Society, these forms will last for several years so a similar outlay will not be needed for some time. A further cost was an extra £130 against *The Muntjac*, but again this was mainly for duplicating requirements which should last for a few years ahead.

We were also involved in capital purchases of £400, mainly for display boards and expenditure for the book of £734, this latter figure being advances against expected future income. However, this does mean that these total costs were over £1800 above our Current Accounts income and in these circumstances we have had to fall back on our Deposit Accounts resulting from The Theed Pearce Legacy of about £7,000.

The assets of the Society are now just under £22,000, but this is really only equivalent to the £7,000 of 12 years ago.

Building Societies have recently been allowed to offer Gross Interest facilities to charities such as our Society and so £3,000 has been invested in the Town and Country Building Society which was offering the best rate of 9.75%. A City of Nottingham Bond of £3,000 became due for payment in June and this amount was re-invested.

We received an income tax repayment of £1,531 for tax paid on interest on bonds.

M.R. CHANDLER

INCOME AND EXPENDITURE ACCOUNT FOR YEAR ENDED 31st DECEMBER 1987

INCOME - Current Accounts

1986		1987	
£		£	
1928	Subscriptions	1920	
81	Sales	32	
51	Surplus on meetings	26	
20	Sundries — donations	135	
<u>2080</u>		<u>2113</u>	

EXPENDITURE - Current Accounts

1986		1987	
£		£	
	ADMINISTRATION		
46	Postage	—	
35	Sundries	39	
40	Insurance	50	
8	Officers' expenses	5	
10	Auditors' honorarium	10	
<u>139</u>		<u>104</u>	
	MEETINGS		
168	Hire of halls	202	
30	Lectures and films	77	
175	Programmes	192	
<u>373</u>		<u>471</u>	
	SCIENTIFIC		
1339	Journal	1453	
22	Recorders' expenses	53	
6	Site recording	—	
21	Sundries	22	
<u>1388</u>		<u>1528</u>	
	PUBLICITY		
—	Application forms	291	
166	Newsletter	301	
25	Advertising and displays	23	
16	Sundries	40	
<u>207</u>		<u>655</u>	
	DEPRECIATION		
12	of equipment	33	
12		33	
<u>-39</u>		<u>-678</u>	
	Excess of income over expenditure		
<u>2080</u>		<u>2113</u>	
	PUBLICATIONS ACCOUNT		
1024	Brought forward	851	
57	Income	128	
230	Expenditure	734	
<u>851</u>		<u>245</u>	

DEPOSIT ACCOUNTS — Interest

355	Bank (H.I.C.A.)	434
—	Town and Country Building Society	17
212	East Staffs. D.C. Bonds	216
70	Leicester City Bonds	65
154	Worthing Corp. Bonds	232
127	Edinburgh City Bonds	155
64	Redbridge Borough Bonds	—
506	City of Nottingham Bonds	471
—	Income Tax Rebate	1531
<u>1488</u>		<u>3121</u>

CAPITAL PURCHASES

—	Display boards	371
—	Duplicator and stand	30
<u>—</u>		<u>401</u>

1986 BALANCE SHEET AS AT 31st DECEMBER 1987 1987

	COST	DEPRECIATION		
		Total	Year	
FIXED ASSETS				
20	Books and Journals	20	5	15
8	Screen	14	2	6
35	Malaise and mammal traps	50	5	30
—	Duplicator and stand	30	1	29
—	Display boards	371	20	351
—	Old duplicator and stand	110	110	—
—	Projector	60	60	—
<u>63</u>		<u>—</u>	<u>—</u>	<u>431</u>

CURRENT ASSETS

154	Bank Current Account	216
4294	Bank High Interest Cheque Account (at 5.5% variable)	2502
33	Cash in Hand	28
—	Town and Country Building Society (at 9.75% variable)	3017
1000	Leicester City Council Bonds (to 15.5.88 at 8.875%)	1000
3000	City of Nottingham Bonds (to 30.6.88 at 10.5%)	3000
3000	City of Nottingham Bonds (to 30.6.87 at 13.25%)	—
—	City of Nottingham Bonds (to 30.6.91 at 8.77%)	3000
2500	East Staffs. D.C. Bonds (to 10.9.89 at 12.0%)	2500
3000	Worthing B.C. Bonds (to 28.11.91 at 10.75%)	3000
2000	Edinburgh City Bonds (to 31.3.89 at 10.75%)	2000
<u>20981</u>		<u>20263</u>
353	Debtors	1236

CURRENT LIABILITIES

1356	Creditors (uncleared cheques)	45
<u>20041</u>		<u>21885</u>

M.R. CHANDLER
Honorary Treasurer

M. and D. READING
Honorary Auditors

METEOROLOGY

Report of the Recorder

Overall, the weather for 1987 did not differ significantly in any respect from the long term averages, but within the space of the year a number of notable weather events occurred. New Year's Day was mild and wet, but a large area of exceptionally cold air was already becoming well established over Scandinavia and Eastern Europe, and by the 5th January this very cold air was pushing steadily westwards towards Britain. Temperatures by night and day became progressively lower. On the 10th January the daytime temperature at best was -2°C (29°F), on the 11th just -4°C (25°F), and on the 12th January the maximum temperature failed to exceed -7°C (20°F). By the same date, night time temperatures were dipping as low as -13°C (8°F). Temperatures remained continuously below freezing until 20th January when temperatures only a little below normal re-asserted themselves.

During this pronounced cold spell, it was often cloudy with light snow flurries giving up to 1 or 2 inches of lying snow in Bedfordshire. This was in complete contrast to the coastal counties of East Anglia and South East England which experienced probably the heaviest snowfalls within living memory. This is a typical situation in cold wintry weather, though particularly accentuated in 1987, where the distance of Bedfordshire from the moist North Sea results in little snowfall inland except occasionally over the higher ground of the chalk downs and the greensand ridge, where the altitude is sufficient to affect precipitation levels. In the same synoptic situation, very low night temperatures are more likely in counties such as Bedfordshire than nearer the coast.

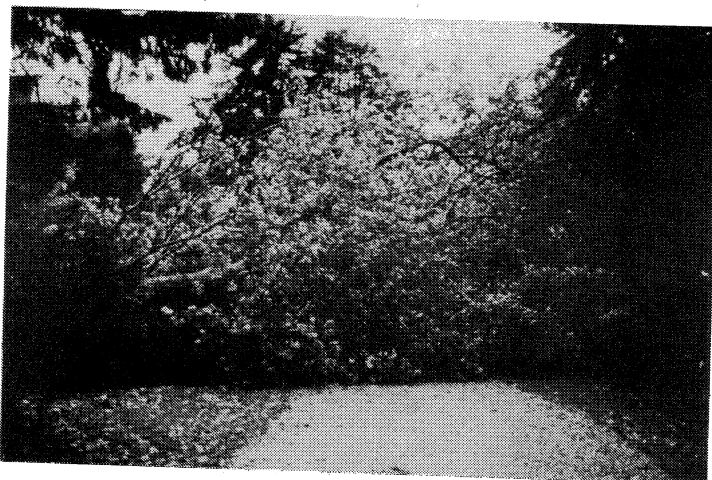
The 12th January would seem to be the coldest day recorded this century, but even lower night temperatures have occurred in January as recently as 1985 and again in January 1982.

The weather in February was quite typical for that time of year, though with frost most nights in the second half of the month. March continued the same trend with frequent frost during the first three weeks. There was also snow early in the month which was much more noticeable over any high ground. The 26th March brought particularly strong winds to much of the country, with gusts up to 80mph and 12 people killed nationally. In Bedfordshire, there was widespread minor damage to trees and fences, but no fatalities.

In contrast, April was generally pleasant with temperatures above average, particularly in the second half of the month when 21°C (70°F) was exceeded on several days. Compared with many Aprils of recent years, 1987 was more typically springlike than has often been the case. Unfortunately, May failed to live up to April's promise. It was a wet month, mainly from heavy showers on a small number of days rather than frequency of rain, but temperatures by night and day were if anything lower than those in April. June was worse with more than twice the normal rainfall, little more than half the expected sunshine and with temperatures generally some 2°C below average. The weather was often showery with hail, thunder and lightning on several occasions, though the last three days were hot and humid.

The two main summer months of July and August, despite the contrary perception of most of the public, were drier than normal with temperatures around the average for the time of year. The first two weeks of July were particularly good — the last two weeks provided the balance by being persistently wet and generally cool and cloudy. Meteorologists like to express the weather in terms of averages. The public are much more affected in their perception by smaller scale events, particularly if their own activities can be related to these.

After an unremarkable September, October began an exceptionally wet period (October experienced three times its normal rainfall). There was flooding in Luton on the 10th and again on the 21st, and by the end of the month the River Ouse was flooding badly in the north of the county. The most notable event of the year also occurred in October with an exceptionally severe depression moving NE across southern Britain on the 16th. Bedfordshire escaped the worst effects (indeed the gales of March were arguably worse in our own county), but scenes of utter devastation greeted many people in counties to the east and south of London. Several million trees are estimated to have been destroyed, their roots easily wrenched from ground sodden by days of rain, with a full canopy of leaves providing maximum obstruction to the winds. In the South East, this storm is thought to vie with the Great Storm of 1703 for its intensity, though that of 1987 was of shorter duration. Also



Storm damage, Barton, October 1987.

(Photo: Mike Williams)

some 18 people are thought to have lost their lives in the 1987 storm (compared with over 8000 in the Great Storm of 1703 as chronicled by Daniel Defoe).

The rest of the autumn offered little of note regarding the weather, and December ended the year on a generally mild note. A average as a whole the weather of 1987 may have been, but some of the weather events will be remembered for a long time to come, and the effects of the October storm will be apparent for generations.

The summary of the year's weather presented below is by courtesy of the AFRC Institute of Engineering Research (formerly the National Institute of Agricultural Engineering) at Silsoe, with thanks to Mrs R.D. Taylor. This is now the only fully equipped recording station in the county. I would also like to acknowledge the assistance of the Anglian Water Authority for copies of their rainfall records from a number of Bedfordshire sites, and the wardens of The Lodge, RSPB, Sandy for additional records.

	Mean Max°C	Mean Min°C	Highest Temp°C	Lowest Temp°C	Rainfall mm	Sunshine hours	Air Frost	Ground Frost	Snow Falling	Snow Lying
January	2.6	-2.1	9.8	-11.6	12.8	48.1	20	23	9	10
February	6.8	0.3	13.4	-8.1	28.3	59.2	16	18	9	2
March	7.4	0.4	12.4	-6.1	44.3	91.2	15	21	11	0
April	15.0	5.7	21.6	1.3	35.2	147.6	0	8	0	0
May	14.8	5.5	22.1	0.4	49.9	164.2	0	11	0	0
June	17.0	9.2	26.4	3.5	107.8	111.2	0	3	0	0
July	20.3	11.4	27.0	7.1	67.5	158.9	0	0	0	0
August	20.2	11.5	27.9	4.7	49.2	154.1	0	0	0	0
September	18.4	10.2	23.4	1.9	30.6	144.5	0	2	0	0
October	14.0	5.8	19.3	-2.9	148.1	126.1	3	9	0	0
November	8.7	3.8	12.4	-5.2	52.0	37.4	3	11	0	0
December	7.9	2.9	14.3	-5.6	21.8	24.4	8	13	1	0
Year	12.8	5.4	27.9	-11.6	647.5	1266.9	65	119	30	12

Table 1. Summary of the weather of 1987 for IER, Silsoe

MIKE WILLIAMS

GEOLOGY AND PALAEOLOGY

Report of the Recorder

This report, my first for over 25 years, can only be described as disappointing. Visits were made to a number of quarries in the Jurassic and Cretaceous beds, but nothing not previously recorded was observed. As I mentioned in the September *Muntjac*, many of the sections once visible and available for study are now either filled in or flooded, and permanent exposures are uncommon.

Early in the year Mr M. Powell, a Society member, sent me some lamellibranchs from the Great Oolite limestone that was exposed in temporary excavations in the Riseley area. It is frequently difficult in Bedfordshire to differentiate between the Great Oolite Limestone and the Cornbrash, as the Great Oolite is rarely — if ever — “oolitic”. A more appropriate name, adopted by many authorities, is the White Limestone which, although sometimes of a bluish tint when first exposed, weathers to a greyish white. Included in the small assemblage from Riseley were the typical Great Oolite Series bivalves *Pholadomya deltoidea*, *Liostrea hebridica* and the mussel *Modiolus imbricatus*.

An in-situ section of the White Limestone was also exposed in a quarry near the railway at the end of Lower Farm Road, Bromham. This quarry, originally a gravel working now disused, is gradually being filled in prior to reclamation for agricultural use. Many years ago a similar quarry on the Clapham side of the railway yielded many specimens, particularly brachiopods, in an excellent state of preservation. Unfortunately, the very high rainfall of 1987 has resulted in most of the present limestone exposure being under water and the only fossils procured were a number of brachiopods from the overlying Lower Cornbrash, in a poor state of preservation, which included specimens of *Cererithyris intermedia* and *Obovothyris* sp. These were obtained from old tips of rubbly limestone that remained above the water level, and all had consequently suffered greatly from the effects of weathering over many years. A close watch will be kept on this site during 1988 in the hope that the water level will eventually fall sufficiently to allow access to the less weathered limestone that remains in-situ.

Occasional inspections were made in Lower Chalk quarries at Barton, Sundon and Dunstable. These yielded nothing new, the only fossils observed being various badly weathered casts of *Inoceramus* sp. Typical Lower Chalk fossils, particularly ammonites, have always been extremely rare in the Bedfordshire Lower Chalk quarries. At Barton Lime Works, when it was a working quarry, no ammonites were recorded except a very large species — *Austiniceras austeni* — that occurred at the lowest horizon excavated. I have one 63 cm in diameter, and it is to be regretted that this ammonite bed has long since been obscured by scree along the one vertical face remaining in the Barton quarry. The cement works at Sundon never yielded many fossils, but the zone ammonite *Schloenbachia varians* occurred fairly frequently at a lower horizon that was exposed nearby when the M1 motorway was under construction in the late 1950s. The large quarry at Dunstable (Houghton Regis) yielded one large (26 cm) *Acanthoceras rhotomagense* in 1947, the only ammonite I ever obtained. Generally speaking, therefore, fossils in the Bedfordshire Lower Chalk quarries have never been as plentiful as geological literature on the Cretaceous System tends to suggest.

During the course of the year approximately thirty visits were made to various quarries in the Leighton Buzzard area in order to further my work on the Lower Albian Shenley Limestone. Despite this number of visits it was not a satisfactory year due, primarily, to the above average rainfall. Slip of overburden clays due to water saturation had, in some instances, buried the junction beds between the Lower Greensand and the Gault Clay for distances up to 100 metres, with the consequent permanent loss of several of the few remaining in-situ limestone exposures. However, although the quarries that were the basis of my reports in the 1950s and 1960s now have very little limestone available for study, one or two interesting and worthwhile discoveries were made. In October, after several days of very persistent rain, a small lenticle of Shenley Limestone was found in an overgrown part of Nine Acre Pit — one of the quarries described in 1903. This lenticle had come to light due to clay slip and downwash, and had lain just under the surface of the overgrown Gault Clay slope for possibly 70 years or more. Despite this, it proved to be immensely hard and no deterioration of the rock had occurred due to the action of the weather over several decades. When in-situ the Shenley Limestone exhibits varied features, some blocks being extremely hard and dense

while neighbouring blocks can be friable and crumbly. Very occasionally it occurs as a soft yellow marl in which the fossils are so fragile as to be almost impossible to remove intact. Several theories have been propounded over the years to explain the differing lithology and structure of these limestone lenticles, but there is no doubt that weathering has little if any effect on the hardest blocks. It is certain that weather action does not reduce a dense, hard lenticle to the soft marly matrix sometimes encountered in the limestone bearing bed, and one can only conclude that the soft material is the unaltered original calcareous mud that, for some reason, failed to become consolidated into limestone.

The most interesting feature of this particular lenticle was the occurrence in it of several specimens of the very rare Cretaceous crab *Pithonoton scarabaeum*. While it was obviously impossible to safely extract all fossils due to the extreme hardness of the rock, four carapaces and several fragmentary thoracic legs were obtained, the carapaces being in excellent condition and attached, of course, to small pieces of matrix. When one considers that I have discovered specimens of this crab, on average, one every five years, the October discovery was a remarkable event.

To conclude this report, it is encouraging to find that quarries at Heath and Reach, on the opposite (west) side of the Shenley Hill ridge to those hitherto described, are advancing eastwards towards Shenley Hill, and the Gault Clay and underlying junction beds (the latter containing the iron-pan and limestone when they occur) are now being occasionally encountered. During the year several visits concentrated on these quarries and, although no significant discoveries were made, small fragments of limestone were obtained from three quarries at their eastern extremities. These small pieces were hardly of a size to be called lenticles, but nevertheless yielded some typical Shenley Limestone brachiopods including *Platythyris capillata*, *Boubeithyris boubei*, *Burrirhynchia leightonensis* and separated columnals of the crinoid *Pentacrinus* sp. Unfortunately, the planned visit to the most extensive excavation has had to be postponed until at least June 1988 due to the difficulties experienced by the quarry operators in removing saturated overburden clay — further proof that 1987 must have been one of the wettest years on record.

ACKNOWLEDGEMENTS

I thank Mr R. V. Melville, MSc. and Dr Raymond Casey, F.R.S. for past help in the classification of the Lower Albian fauna, also the following quarry owners for allowing me access to their various workings:— Mr E. W. Stratford, Park Farm, Clapham; Messrs. Joseph Arnold and Sons Ltd., Billington Road, Leighton Buzzard; Mr F. R. Walpole and Mr R. J. Saunders of L. B. Silica Sand Ltd., Grovebury Road, Leighton Buzzard; Blue Circle Industries PLC, Derby, and their staff in the field who are invariably most helpful.

P. J. SMART

MAMMALS

Report of the Recorder

Once again the weather was a major factor in the successes and failures of mammals. The year started cold, had a warm, damp summer and finished very mild. The summer was good to Badgers, who fed well and were not exposed to difficult conditions right through to the end of the year. The mild winter also was a benefit to another hibernating species, the Hedgehog, and two members reported seeing animals in their gardens on Christmas day with other reports of activity to the end of the year. Records were obtained for 33 species, four more than the previous year.

Hedgehog *Erinaceus europaeus* The first animal of the year was seen on the 6th April in Luton (TL02X) by M. Allen, with others following on 16th April in Sundon (TL02N), 17th April in Studham (TL01C), 20th April in Luton again (TL02R). The last animals were all of small size and seen on the 25th December in Flitwick (TL03H), Barton (TL03V) and 30th December in Luton (TL02R). These are very late dates and were due to the mild temperatures, allowing a continuation of feeding.

Water Shrew *Neomys fodiens* Only two records for the whole county. A live animal seen in the River Lea at East Hyde (TL11I) and a dead one found at Priory Country Park, Bedford (TL04U).

Bats A massive increase in records was obtained by the welcome and hard work of Joan Childs and Tony Aldhous. Records were obtained for Pipistrelle, Daubenton's, Natterer's, Noctule and Brown Long-eared. Bats were seen flying from 28th February in Luton (TL02X) right through to 19th December when a Noctule was seen flying at Priory Park Bedford (TL04U). Generally members reported numbers as lower than in previous years but it must be remembered that this is a subjective rating. Bat roosts checked showed two sites of about 10 Natterer's at Stevington Church (SP95W) and Battlesdon Church (SP92P), while a Pipistrelle roost at Leighton Buzzard (SP92D) had 201 Bats. The October storm may have caused serious loss of roosting sites in old trees but it could produce new sites for the future where branches have been torn off. No direct information has been reported after the storm but in March a large beech tree was cut down at Turvey (SP95R) which was found to contain 20 Noctules. Only one Bat died as a result of the felling, which is remarkable. Several members reported the lack of use of Bat boxes but Bedfordshire's first Bat box use was reported from Bedford (TL04U) when 6 Pipistrelles were found in a box in September. Two feeding observations of interest were reported. L. Smith and B. Horne saw bats maintaining territoriality whilst feeding along a length of hedge and driving away other Bats trying to feed at the site. G. Dennis reported a different sort of feeding behavior when he witnessed a Hobby trying to catch flying Bats, but without any observed success.

Rabbit *Oryctolagus cuniculus* Generally numbers were reported as lower than usual, with several reports of myxomatosis. However, at Millbrook Test Track (TL03E), over 900 animals were caught between January and October, while the late R. Collins reported seeing Rabbits feeding in the early mornings on the lawns of Bedford Hospital (TL04P), this being well into the built up area of the town. The Rabbits were living under the buildings.

Small Mammals An interesting trapping programme was undertaken at Maulden Wood barn (TL03U) where House Mice were found feeding on stored wheat seed. A total of 44 animals were caught. House Mice were reported at four other sites, well up on normal years. The Maulden Wood meeting in September produced catches of Bank and Short-tailed Voles, Wood and Harvest Mice and Common Shrew. Over-all county results showed small mammals as lower in numbers than 1986, with gains for Bank Vole, House Mouse and Yellow-necked Mouse but losses for all other species.

Water Vole *Arvicola terrestris* Only two records were obtained in the whole county; at Sundon Quarry (TL02N) and Stewartby Lake (TL04B). This was despite many people looking for this easy to see and identify species. It would appear a major crash is taking place. Mink predation could explain the loss along the River Ouse area, but not in the south of the county, and water quality must be suspected.

SPECIES	1971-1985	1986	1987	1986-1987
Rabbit	342	28	50	70
Mole	299	15	22	32
Harvest Mouse	280	0	4	4
Hare	243	34	43	64
Hedgehog	239	29	37	56
Brown Rat	208	10	21	29
Squirrel	198	25	29	47
Fox	197	29	35	58
Wood Mouse	172	10	7	14
Common Shrew	167	5	15	17
Short-tailed Vole	158	4	6	9
Stoat	149	15	15	25
Weasel	145	9	13	21
Muntjac Deer	136	36	37	58
Bank Vole	109	3	8	11
Badger	99	27	29	40
Water Vole	85	1	2	3
House Mouse	79	4	5	8
Pygmy Shrew	68	3	2	5
Pipistrelle Bat	41	1	60	60
Water Shrew	31	1	2	3
Chinese Water Deer	24	3	2	5
Mink	20	2	3	5
Brown Long-eared Bat	18	4	14	17
Fallow Deer	16	4	6	8
Ferret	13	0	1	1
Daubenton's Bat	6	0	12	12
Red Deer	6	0	1	1
Natterer's Bat	4	2	7	8
Noctule Bat	4	0	10	10
Fat Dormouse	4	1	1	1
Dormouse	3	0	0	0
Yellow-necked Mouse	3	1	2	2
Sika Deer	3	1	1	2
Wallaby	1	0	0	0
Barbastelle Bat	1	0	0	0
Otter	1	0	0	0
Whiskered Bat	0	1	0	1

Table. Species recorded in Bedfordshire since 1971, with the number of tetrad records for different years

Brown Rat *Rattus norvegicus* There was a marked increase in the number of rats seen. Several sites were reported with 20 or more animals. The species was generally considered to be more common all over the county.

Grey Squirrel *Sciurus carolinensis* A large number of the black colour phase — or melanistic — animals was seen. These were reported from Whipsnade (TL01D), Studham (TL01H), Woburn (SP93Q), Dunstable (TL02C), Hexton (TL13F) and Everton (TL25A). This form of the species is only a colour variation and breeds freely with the normal grey type. The grey type was widespread and up to its usual high numbers.

Badger *Meles meles* The cool and damp summer was just to the liking of Badgers and allowed good feeding for the cubs just at the time they were being weaned. Badger watch results and sett

checks indicated that both adult and cub populations were up in the county. Family group size also increased, so there was no increase in the number of active setts, although these setts were not necessarily always those used in previous years, there being some movement from old to new setts. As always, road deaths were a major cause of loss, at least 17 animals being known to be killed this way which is bound to be an underestimate of the true number. Also some setts were lost to digging and the encroachment of house building. The county distribution map shows that most Badgers are found in the south of the county.

Deer The Muntjac continues to be well recorded both in population and distribution, and has increased in both areas from 1986. Fallow, Chinese Water, Sika and Red Deer were all recorded in new sites and in slightly higher numbers than previous years, although the overall populations of all these species is low and their distribution very limited.

ADDITION

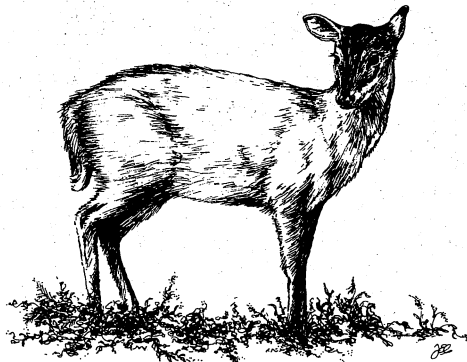
It has come to my notice that about 1984, T. Thomas was called to remove a very dead Black Rat from an aircraft at Luton airport. The body was in a wing section and could not have escaped even if it had been alive. Not really a Bedfordshire record, but an interesting modern development of the old method of immigration of foreign species.

ACKNOWLEDGEMENTS

My thanks go to the increased number of people who sent in records: a total of 68. This was made up of 53 members and 15 non-members. The state of our knowledge of Bedfordshire's mammals is the direct result of your hard work. The contributors were:—

J. Adams, A. Aldhous, D. Allen, M. Allen, D. Anderson, G. Arnold, V. Arnold, B. Bright, R. Brind, J. Brown, C. Burton, S. Cham, B. Champkin, A. Chapman, J. Childs, B. Clutton, R. Collings, J. Comont, D. Conran, R. Dazley, G. Dennis, C. Dony, J. Dony, W. Drayton, L. Evans, M. Evans, A. Ferguson, D. Green, A. Halton, S. Halton, S. Harris, G. Hooper, P. Hooper, B. Horne, P. Jackson, L. Jarrett, R. Johnson, E. Jones, J. Kemp-Gee, G. Kingsnorth, T. Lee, D. Manning, B. Nau, E. Newman, D. Nicholls, B. Nightingale, D. Parsons, R. Passley, H. Pegg, V. Phillips, M. Powell, D. Rands, E. Rands, R. Revels, D. Richardson, M. Rowland, D. Smith, L. Smith, R. Spicer, B. Squires, A. Stephenson, B. Stephenson, A. Summerfield, P. Symonds, C. Tack, P. Trodd, D. White, A. Woodgate.

DAVID ANDERSON



Muntjac

(Joan Childs)

MUNTJAC DEER (*MUNTIACUS REEVESI*)—THE EARLY YEARS by David Anderson⁽¹⁾ and Stephen A. Cham⁽²⁾

Chinese Muntjac deer (*Muntiacus reevesi*) are now widely distributed across most of southern England, the Midlands and the Welsh border counties. Its existence in the British Isles derives from individuals introduced into Bedfordshire, in 1925 at Woburn.

Chinese Muntjac are a diminutive species of deer measuring up to 48 cm at the shoulder and weighing about 14 kg in males and 12 kg in females. They have a rich glossy chestnut colour and the males bear a pair of simple antlers typical of many non-herding deer species. These antlers are cast each year in common with other deer species. The upper canine teeth of males are enlarged and project from the mouth and are often used in disputes with other males in preference to the antlers. They are highly territorial and establish a system of runs throughout their home range which are patrolled at regular intervals. Much of their time is spent in dense vegetation where elaborate antlers would be a distinct hindrance.

Muntjac breed throughout the year with a seven-month gestation period; young fawns have been observed during all months of the year. The underside of the tail is white and prominently displayed aloft when alarmed. One's first encounter with Muntjac is usually the sight of a rapidly disappearing white tail. Muntjac are also known as 'barking deer' because of the sharp resonant bark call. In India the Indian Muntjac is said to mark the location of tigers in cover by its loud bark.

There are five species of Muntjac, all of which occur in Asia: Indian (*M. muntjak*), Chinese or Reeves' (*M. reevesi*), Hairy-fronted (*M. crinifrons*), Fea's (*M. feae*) and Roosevelt's (*M. rooseveltorum*) (Whitehead 1972). Indian Muntjac were first brought into Great Britain by the 11th Duke of Bedford who introduced them to Woburn Park during the late 1890s. The Duke was a great experimenter with unusual deer species and many have been kept at various times at Woburn (Whitehead 1964 and 1973). Indian Muntjac were first released into paddocks at Woburn and later into the evergreens area of the park where they thrived in the dense cover (Talbot 1980). The dates of introduction by the Duke are shown in the Table.

Date	Species	Location
Late 1890s	Indian (<i>M. muntjak</i>)	Woburn
1925	Chinese (<i>M. reevesi</i>)	Woburn
1930	Chinese (<i>M. reevesi</i>)	Whipsnade

Table. Early introduction of Muntjac by the 11th Duke of Bedford

There were a number of escapes in subsequent years and they reproduced successfully inside and outside the park. Due to the aggressive nature of the Indian Muntjac it was decided to replace them with the smaller and more docile Chinese or Reeves' Muntjac. This species was named after John Reeves (1774-1850) who was inspector of tea for the East India Company in Canton, China. Reeves was a keen naturalist and was elected a Fellow of the Royal Society and to the Linnean Society in 1817. The Chinese Muntjac were equally successful and rapidly established themselves in the woodlands surrounding the park. Many attempts were made to exterminate the Indian species and for many years there was uncertainty as to whether the two species had interbred in the wild. Various authors have stated that both species may still be present (Lever 1977) or exist as hybrids (Bray 1981). However, skull measurements and chromosome studies have shown unequivocally that the only species still present in Britain is the Chinese Muntjac (Chapman and Chapman 1982, Chapman, Chapman, Matthews and Wurster-Hill 1983).

Addresses: (1) 88 Eastmoor Park, Harpenden, Herts AL5 1BP
(2) 45 Wellmore Road, Luton LU3 2TN.

In its native habitat in south-east Asia, Chinese Muntjac inhabits the scrub vegetation between 200 and 400 metres in the hills and low mountains of much of tropical and sub-tropical China. In Britain Muntjac have been found in a variety of habitats including scrub, deciduous and coniferous woodland and dense areas of bramble and rhododendron. The variety of ground cover and the density appear to be important (Chapman, Claydon, Claydon and Harris 1985) and the greater the diversity the greater the potential for higher numbers of Muntjac.

Following the initial escapes from Woburn the deerkeepers and gamekeepers followed a policy of 'no culling' up to 1968 (Talbot 1980) and this would have enabled the Chinese Muntjac to get a firm foothold in the area around the park. Early sightings away from the Woburn area are very sparse, the earliest was at Wrest Park, Silsoe in 1922, which would have been the Indian species. Two years later they had also been seen on the Ashridge Estate on the Bedfordshire/Hertfordshire border. There appears to be no more records for the 1920s which coincides with the extermination of Indian Muntjac and the introduction of Chinese Muntjac in 1925. In 1933-4 they were being sighted in Salcey Forest and Yardley Chase on the Buckinghamshire/Northamptonshire border. They continued to spread in a northerly direction and were being reported around Kettering in 1937 and in east Warwickshire in 1941 (Pickvance and Chard 1960). During this time numbers were building up in Bedfordshire and they were reported as being well-established in Amphill Forest (Maulden Woods) by 1938. The introduction of Chinese Muntjac to Whipsnade Park Zoo around 1930 with subsequent escapes would have further supplemented numbers in the wild.

Muntjac also appear to have spread out in an easterly direction from Bedfordshire. In 1938 one was shot by a keeper at Broxbourne in Hertfordshire, the first record for that county. However, this animal may have been an escape from a collection of Major A. Pam at Wormley Bury. In Suffolk the first record came from Parham near Framlingham in 1940 (Cham 1984). A year later a male was shot near Colchester in Essex (Waller 1954). These records are substantial distances from Woburn suggesting a very rapid rate of dispersal.

The first record for Cambridgeshire was much later, in 1961, when an individual was flushed from Hayley Wood (Symonds 1983). Had it not been for the large number of visitors to this wood this may have gone unnoticed. The small size and secretive nature of the Muntjac means they are easily overlooked and the lack of early records in Bedfordshire reflects this. In fact Palmer (1946) states "apart from possible escapes from Woburn Park there are no wild or feral ungulates present in the county". In subsequent annual mammal reports there is no mention of Muntjac in Bedfordshire until 1966.



Muntjac Deer, male (left), female (right).

(Photo: Steve Cham)

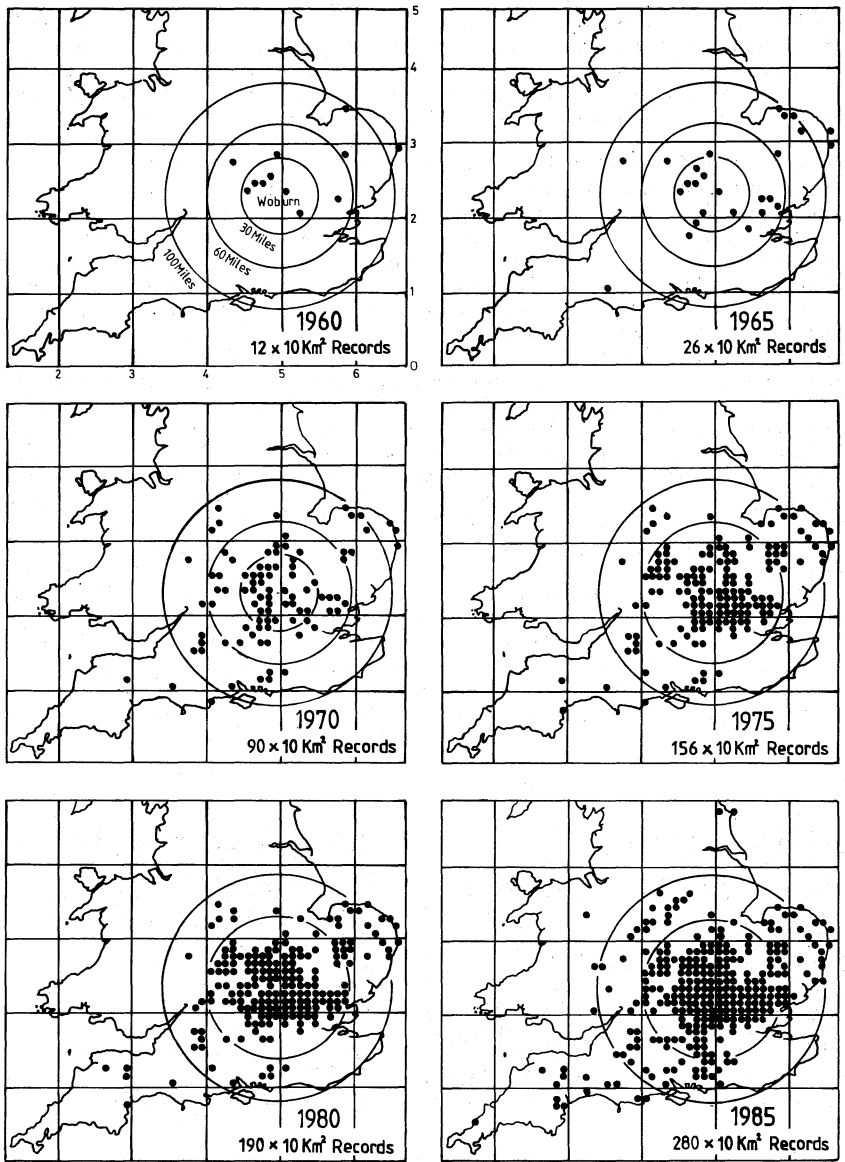


Figure 1. The distribution of Chinese Muntjac 1960-1985

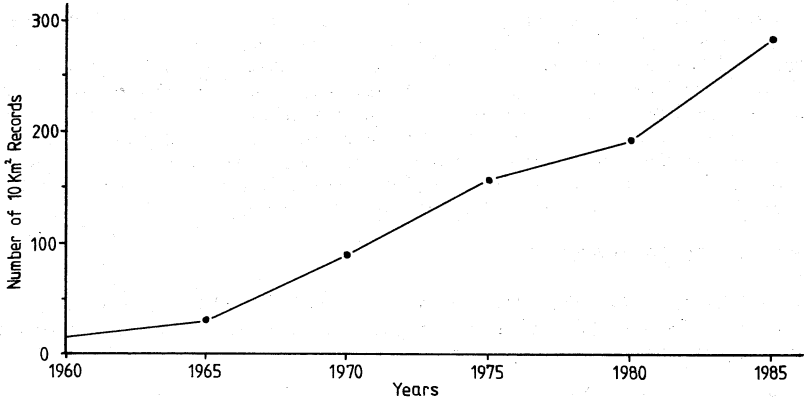


Figure 2. 10km square records of Chinese Muntjac at 5 year intervals 1960-1988

The early diaries of Dr V. Chambers record a pair of Muntjac in Maulden Wood on 29th May 1955 and he also refers to them being present around 1935. B. Squires made his first observation at Battlesden in 1966. B. Nightingale records a single animal at Aspley Heath in January 1967 and two at Eversholt later in the same month. These were his only sightings until 1970. After this time sightings were more frequent and Anderson (1985) reports them as being common by 1971. In 1976 a Muntjac catchup was held in a one hectare plot in Maulden Woods and this produced thirteen animals. It appears that, in suitable habitat, fecundity can be very high. In Forestry Commission woodland in Cambridgeshire numbers of Muntjac have been reported to double each year (Symonds 1983).

The Muntjac's own social behaviour is largely responsible for the increasing number of sightings in new areas. Mature buck Muntjac establish distinct territories which they patrol regularly. Young males are not tolerated and would be quickly driven off. Young males therefore move into fresh areas to establish their own territories. This behaviour is probably one of the main factors contributing to the rapid spread of Muntjac.

In recent years there have been an increasing number of sightings of Muntjac in urban areas. In Bedfordshire they have been found living in and around gardens in Dunstable, Luton, Leagrave, Stopsley and Leighton

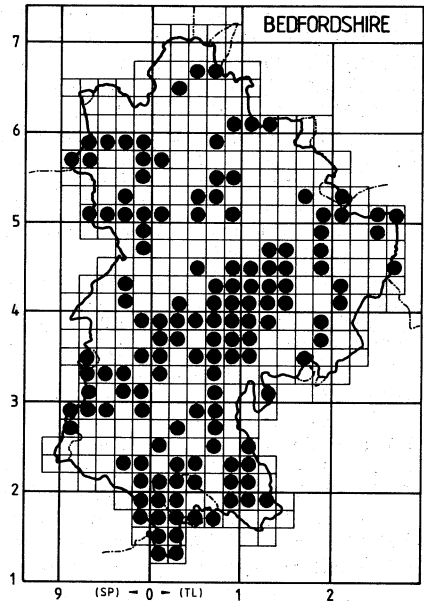


Figure 3. Tetrad distribution of Chinese Muntjac in Bedfordshire

Buzzard. In Leighton Buzzard and Stopsley regular visits by Muntjac have led to the destruction of rose gardens. In six cases of Muntjac in urban areas of Essex, Chapman (1977) found that the individuals were young males, probably expelled from established territories.

From small beginnings Muntjac have rapidly colonised much of southern Britain and have firmly established themselves as a British mammal. This is clearly shown in the distribution maps (Figure 1) and in the graph (Figure 2). There is every indication that this expansion is set to continue into new areas. In Bedfordshire Muntjac are widely distributed across the entire county (Figure 3) and in some areas the numbers are so high that control measures are being employed. Its presence, however, is generally welcome and it makes an interesting addition to the British fauna. The Bedfordshire Natural History Society can feel proud to have it as their emblem.

ACKNOWLEDGEMENTS

The authors would like to thank Mrs V. Chambers for making available the late Dr V. Chambers' diaries, and to Mrs Norma Chapman for reading and criticising the manuscript, and to Miss Diane Gillott for typing it.

REFERENCES

- ANDERSON, D. 1986 Distribution of Bedfordshire mammal species 1971-1985 *Bedfordshire Naturalist* **40** 13-20
- ARNOLD, H.R. 1978 *Provisional Atlas of the Mammals of the British Isles* Biological Records Centre NERC
- ARNOLD, H.R. 1985 *Atlas of the Mammals of the British Isles* Biological Records Centre NERC
- BRAY, D.W. 1981 Taking Muntjac seriously *Deer* **5** 184-185
- CHAM, S.A. 1984 A survey of the distribution of deer in Suffolk *Trans. Suffolk Nat. Soc.* **20** 10-24
- CHAPMAN, D.I. 1977 Deer of Essex *Essex Naturalist* **1**, Essex Field Club
- CHAPMAN, D.I. and CHAPMAN, N.G. 1982 The taxonomic status of feral Muntjac Deer (*Muntiacus* sp.) in England *J. Natural History* **16** 301-387
- CHAPMAN, D.I., CHAPMAN, N.G., MATTHEWS, J.G. and WURSTER-HILL, D.M. 1983 Chromosome studies of feral Muntjac deer in England *J. Zool, Lond.* **201** 557-559
- CHAPMAN, N.G., CLAYDON, K., CLAYDON, M. and HARRIS, S. 1985 Distribution and habitat selection by Muntjac and other species of deer in a coniferous forest *Acta Theriologica* **30** (18) 287-303
- CLARKE, M. 1974 Deer distribution survey 1967-72 *Deer* **3** 279-282.
- LEVER, C. 1977 *The naturalised animals of the British Isles* Hutchinson and Co. Ltd, London
- PALMER, R. 1947 Mammals of Bedfordshire *J. Bedfordshire Nat. Hist. Soc. and Field Club* **1** 47-50
- PICKVANCE, T.J. and CHARD, J.S.R. 1960 Feral Muntjac deer in the West Midlands with special reference to Warwickshire *Proc. Birmingham Nat. Hist. Phil. Soc.* **19** 1-8
- SYMONDS, R. 1983 A survey of the distribution of deer in Cambridgeshire *Nature in Cambridgeshire* **26** 52
- TALBOT, D. 1980 Reeves Muntjac at Woburn: Their habits, history and management *Deer* **5** 27-28
- TAYLOR, K. 1981 The northerly spread of Muntjac in the Midlands *Deer* **5** 185-186
- WALLER, A. 1954 Deer from Asia — In Essex *The Field* 263-748
- WHITEHEAD, G.K. 1964 *The deer of Great Britain and Ireland* Routledge and Kegan Paul
- WHITEHEAD, G.K. 1972 *Deer of the World* Constable, London
- WHITEHEAD, G.K. 1973 Woburn Park and its deer *Deer* **3** 72-76

BIRDS

Report of the Recorder

REVIEW OF 1987

The year began at a hectic pace during the cold weather of January as birds streamed west to escape the arctic conditions in Eastern Europe. A visible migration of Lapwing, Skylark and winter thrushes was most apparent. Parties of Bewick's Swans were scattered around the clay pits, and flood meadows at Tempsford and a drake Common Scoter was found at Wyboston GP. White-fronted Geese were at Radwell GP, Brogborough and Dunstable SW and a Black Redstart was seen briefly at Kempston. Stewartby Lake attracted both Slavonian and Red-necked Grebe amongst the many Great Crested plus Pintail, Smew and good numbers of Cormorant. The gull-watchers found both Glaucous and Iceland Gulls, along with two Mediterraneans, and a flock of 2000 Golden Plovers haunted the fields around Radwell. A Sanderling on the frozen Ouse at Bedford proved most confiding as did a Snow Bunting further south on Blows Downs. Even more exciting were the first records of Waxwings since 1975, at Luton, Sandy and Ampthill. Raptors of note included Hen Harrier at Potton, a Merlin at Cardington and Brogborough, Short-eared Owls at two sites and at least five roots of Long-eared Owls. A Firecrest was a good find at Flitwick Moor in February as was a Brent Goose at Grovebury Pit. The excitement continued into March with an unprecedented passage of over 100 Bewicks Swans at Brogborough, Priory Park and Everton while another Mediterranean Gull appeared at Houghton Regis CHP. Another Brent Goose was at Stewartby Lake for a day, but a Rock Pipit at Radwell GP stayed into April. At least seven Slavonian Grebes occurred around the Bedford pits with a Black-necked Grebe at Stewartby Lake on 13 April.

Blows Downs recorded a good passage of Wheatear, Ring Ouzel, warblers, pipits and Cuckoo although Redstart and Whinchat were both scarce, with only one record of Pied Flycatcher and Black Redstart; and Goldcrests were completely absent. The highlight however was a 'trip' of 10 Dotterel in exactly the same field as last year. Further north at Priory Park 29 Little Gulls were noted on one day while the Black Tern passage peaked at 30 one afternoon at Brogborough Lake. Other spring rarities were Wryneck at Old Warden, two Corncrakes at Astwick and Ickwell, a Water Pipit at South Mills NR and the county's first ever Bluethroat at Luton on 28 May.

The breeding season was variable with cold wet weather resulting in a low fledgling success rate for many species. Lady Amherst's Pheasant suffered particularly so, along with other ground nesting birds. At the CBC plots most species seemed to be stable, although for different reasons, both Turtle Dove and Tree Sparrow still gave cause for concern and Nightjar failed to appear in the Lower Greensand woodlands. Colonies of gulls prospered at the expense of the Common Tern, and Gadwall, Shoveler, Teal and Ruddy Duck all bred. Buzzards could be found at three sites and Short-eared Owl at one while Hobbies were widespread. Quails occurred in the south and middle of the county.

Rarities in June included a disorientated Grey Phalarope (the first this century) at Stewartby Lake, a Manx Shearwater in Bedford and a Marsh Harrier over Priory Park.

The return wader passage was early this year and Bedford SW held Wood, Green and Common Sandpipers with several Spotted Redshanks and a Curlew Sandpiper at South Mills NR. Greenshanks were widespread and two Wrynecks were found. On 23 August a party of eight Arctic Skuas over Willington GP went into the record book as the first for the county and an impressive 29 Sandwich Terns moved through Priory Park.

Into September and two more Manx Shearwaters, at Bedford and Wyboston, were eventually released on the east coast and 21 Black Terns briefly visited Dunstable SW. A Little Tern was at Stewartby Lake and a Red Crested Pochard was tracked through Priory Park to Harrod CP.

A Blue-winged Teal, at Dunstable SW on 11 October was a new county record, but unfortunately did not stay and was only seen by two observers. October is usually a quiet month as most observers head west for the Isles of Scilly, but the 'Great Gale' of 15th/16th changed all that! The hurricane force winds displaced pelagics migrating south across the Bay of Biscay, scattering them all over SE England. Bedfordshire fared less well than counties to the south but still recorded, Sabine's Gull — new to the county — nine Bonxies and yet another Grey Phalarope. Two Bearded Tits at Stewartby

Lake and a Merlin in the Ivel Valley rounded the month off nicely.

The year ended with several Scaup and three Glaucous Gulls at Brogborough Lake, another Merlin, two Red-necked Grebes and wintering Green Sandpipers at Willington GP and Dunstable SW. The latter site also had 18 Oystercatchers on 24 December.

During 1987 a total of 185 species were recorded within the county boundaries, Bluethroat, Arctic Skua, Blue-winged Teal and Sabine's Gull were all new. Black-winged Stilt and Ring-billed Gull are still awaiting adjudication by the British Birds Rarities Committee and are, therefore, not included in the yearly tally.

I would like to thank the Rarities Committee of A.J. Livett, B. Nightingale, M.J. Palmer, Dr J.T.R. Sharrock and D.S. Woodhead for their advice and comments on rare birds. John Marchant at the BTO supplied details of the CBC results from three plots carried out by C. Horton, G. Pilkington and B. Nightingale while Rob Dazley collated all the records from the *Bird Bulletins*, making this report as comprehensive as possible. Thanks go also to our artists Andy Chick and Peter Marshall, whose work greatly enhances the overall presentation of the report, along with photographs by R. Dazley and P. Trodd.

Last but not least my appreciation goes to the following contributors:

J. Adams, C. Aldridge, Mr Allen, S. Alliez, P. Almond, D. Anderson, V. Arnold, D.H. Ball, W.E. Barrett, R. Bashford, M.J. Beauchamp, P. Biegala, K. Boardman, N. Bridgeland, R. Brind, C.W. Burton, G. Buss, L. Carmen, R.C. Catchpole, A.H. Chapman, J. Chapman, R. Chalkley, A.P. Chick, J. Clark, G.W. Dawes, I.K. Dawson, R. Dazley, R. Dennis, T. Donnelly, W. Drayton, L. Evans, M. Evans, M. Everett, Dr A.W. Ferguson, A. Ferguson, N.R. Finan, E.J. Fisher, R. Foskett, P. Fuller, W. Gerrard, A. Gill, A. Graham, D. Green, M. Green, S. Harding, Dr R.D. Harper, J. Haw, L.S. Hazzard, P. and P.B. Hickey, J. Hillyard, R. Hill, P. Holden, C. Horton, H. Muir-Howie, R.A. Hume, M.S. Hunt, A.M. Hynes, D. Inman, R. Johnson, L. Jarrett, J. Jarvis, I. Kelly, J.P. Knowles, D. Kramer, D. Lampitt, A.J. Livett, D. Manning, J. Marchant, P. Marshall, E. Newman, B. Nightingale, R.A. Nye, D.J. Odell, P. Oldfield, M. Paine, M.J. Palmer, D. Parsons, R. Parsnidge, T. and D.A. Peterkin, Dr R. Pettifer, G. Pilkington, G.D. Player, Mr Ploughman, Dr T.O. Pocock, D. Rackham, R. Radley, P. Rhodes, D.J. Robinson, G. Robinson, N. Rogers, G. Rowe, Dr J.T.R. and K. Sharrock, K. Sharpe, Dr M.J. Simmonds, M. Sklar, P. Smith, D. Smith, P. Soper (PSo), R.A. Spain, B.R. Squires, B. and S. Stephenson, Mrs Sutton, J. Swann, Mr Swannell, P. Symonds, C. Tack, J.J. and J.B. Temple, D. Thomas, A. Tomczynski, J.K. Trew, P. Trodd, S. Warren, K.R. Weeden, P.J. Wilkinson, M. Williams, S. Wilson, R. and S. Wing, S. Winter, D.S. Woodhead, R. Wooding.

SYSTEMATIC LIST FOR 1987

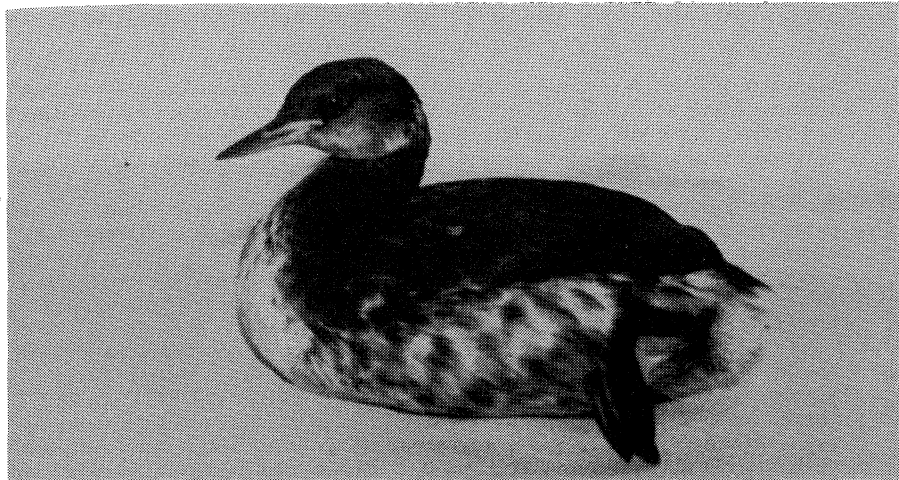
Nomenclature follows the 'British Birds' list of the Western Palearctic (1984).

The following abbreviations have been used in the text: BBRC — British Birds Rarities Committee; BTO — British Trust For Ornithology; CBC — Common Birds Census; CHP — Chalk Pit; CLP — Clay Pit; CP — Country Park; GP — gravel pit; SP — sand pit; SW — sewage works. Place names follow those stated by B. Nightingale (*Bedf. Nat.* 39 73-74) except Barkers Lane (TL 076 493) which is now generally known as Priory Park.

Non-passerines

Little Grebe *Tachybaptus ruficollis* Breeding season records as follows: Luton Hoo two pairs; Houghton Regis CHP three pairs, first young on 23 May; Vicarage Farm Pit one pair, young seen on 2 August; South Mills NR three pairs, two juveniles seen on 8 June. Remains under-recorded as a breeding species. Otherwise a scattering of winter records from the Bedford Clay Pits.

Great Crested Grebe *Podiceps cristatus* Breeding pairs were noted at the following localities: South Mills NR (one), Brogborough Lake (two) Stewartby Lake (one), Vicarage Farm Pit (one),



Red-necked Grebe

(Photo: Paul Trodd)

Chimney Corner CLP (two), Rookery Pit (one), Millbrook Pit (two), Langford Lakes (one), Woburn Lake (one), Houghton Regis CHP (one), Blunham Lake (one), Girtford GP (one), Battlesden Lake (one), Grovebury Farm Pit (three), Priory Park (one). The main wintering concentration was at Stewartby Lake where numbers peaked at 121 on 18 January. Priory Park held a maximum of 42 on 22 March and 54 on 6 December, with 22 at Harrold CP on 14 March and 16 at Radwell GP.

Red-necked Grebe *P. grisegena* A first winter bird picked up exhausted on the frozen Grand Union Canal at Linslade on 11 January died at the recorder's house on 12 February (WT, PT) (see photograph). An immature bird was at Stewartby Lake from 15 January to 31 (MJP, DJO *et al*) with a different one at Harrold CP from 8 February to 22 March (DSW *et al*). A moulting adult was at Brogborough Lake on 15 August (JBT, DT) and a juvenile moulting into first winter plumage stayed at Radwell GP from 7 November to at least 6 December (DSW *et al*) and could have been the same bird briefly seen at Blunham Lake on 14th (PO).

Slavonian Grebe *P. auritus* An unprecedented year involving eight individuals. The first at Stewartby Lake on 18 January, then in the passage period, one at Brogborough Lake from 20-29 March; another at Chimney Corner CLP on 27th, two in partial summer plumage at Priory Park on 5 April; another at Stewartby Lake on 6th, one at Chimney Corner CLP 11th-17th and finally one at Brogborough Lake between 17 and 19 April (MJP, DJO, DHB *et al*).

Black-necked Grebe *P. nigricollis* One in full breeding plumage at Stewartby Lake on 13 April (PA, MJJP) and one at Blunham Lake on 20 August (RAH).

Manx Shearwater *Puffinus puffinus* On 24 June one was found under a car in Shefford, brought to The Lodge, Sandy by a Bedford Vet. and released successfully that evening at Tollesbury, Essex. In September one was picked up on the A1 at Wyboston on 12th with one at Bedford on 14th. Both were released at Salthouse, Norfolk on 19th (per IKD). These are the first multiple records since the 'wreck' of 1953.

Cormorant *Phalacrocorax carbo* Recorded in every month of the year right across the county, but mainly from the Bedford Clay Pits at Stewartby and Brogborough Lakes where a maximum of 21 were noted on 25 January. Regular counts at Stewartby Lake reflect the general abundance pattern as follows:

Monthly maxima of Cormorant at Stewartby Lake.

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
19	4	6	5	1	2	1	0	2	5	3	8

Elsewhere small numbers were noted, mainly from Jan–April and Sept–Dec, at Priory Park, Chimney Corner CLP, Radwell GP, Harrold CP, Elstow Pit, Coronation CLP, and in the Ivel Valley at South Mills NR and Blunham Lake. A single over Whipsnade Zoo in November was of note, as were six over Houghton Regis CHP on 22 March and a maximum of two at Luton Hoo on 28 September.

Grey Heron *Ardea cinerea* At Luton Hoo three nests held young on 27 April with a fourth unsuccessful. Breeding was suspected at Bromham Hall, but there were no details from the other known heronry at Southill Park.

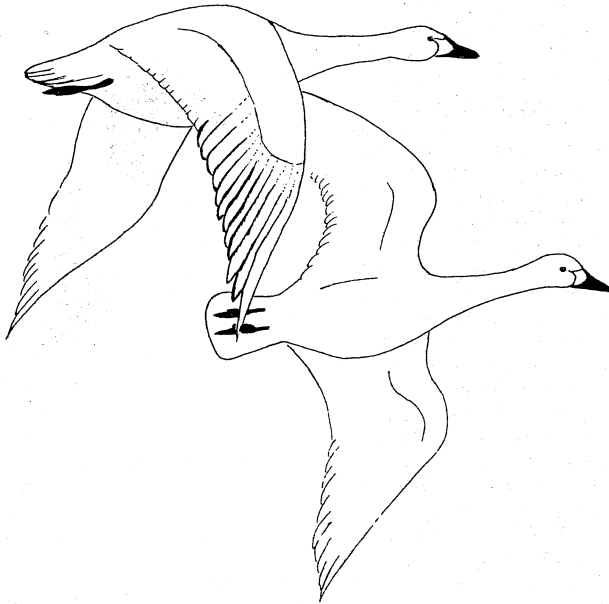
Post breeding dispersal was apparent at Grovebury Road Pit with a high of 13 on 18 July and Bramingham Wood, Luton had a single fishing in the pond on 7 November, constituting the first record for the site.

Mute Swan *Cygnus olor* Successful breeding was noted at the following locations; Stewartby Lake one pair with five young; Chimney Corner CLP one pair three young; Vicarage Farm Pit; Rookery Pit one pair raised six cygnets; East Hyde; Luton Hoo one pair with four young; Dunstable SW one pair five young; Edlesborough Ford one pair seven young; Bromham one pair with five young; and Tempsford where two pairs were noted. Winter gatherings peaked on the River Ouse, Bedford on 14 January when 38 were counted, Stewartby Lake held 17 on 15th and 27 had assembled on flood meadows by the A1 north of Tempsford by the 24th. A spring count of 51 at Radwell GP on 13 April was impressive as were 41 on 14 November. Post breeding numbers rose to 32 in August at Stewartby Lake with 24 on the River Ouse at Bedford.

Bewicks Swan *Cygnus columbianus* Continuing the increasing trend of recent years plus an unprecedented passage in March. The first were at The Lodge, Sandy with 33 overhead on 12 January followed by eight adults at Brogborough Lake on 13th. From the 18th–25th 16 could be found in a field north of Liddington and from 23 January–4 February five were on flooded fields by the A1 north of Tempsford. At Brogborough Lake on 13 March 42 (four with yellow dyed sterns from Slimbridge) stayed on until the 14th when 44 adults arrived totalling a massive 86 swans, the highest count ever in the county. Forty six flying NE over Everton the same day probably related to the same movement, along with 18 over Priory Park on 13th. At Radwell GP there were nine on 11 March, six on 16th, then 20 from 19th–20th. In the autumn four flew over Kempston on 4 November with two at Brogborough Lake on 3rd, 20 flew SW over Radwell on 14th and three were at Felmersham the same day. In December three were at Blunham Lake on 8th with seven at Harrold CP on 9th and finally ending an incredible year for this species five at Cardington on 5th.

White-fronted Goose *Anser albifrons* On 16 and 17 January seven were at Radwell GP with another five at Dunstable SW also on 17th. At Cardington Airfield a single appeared with three Greylags on 18th January and stayed until 20th while a group of 12 were in the Brogborough Lake area from 24th–26th, with seven the next day at Stewartby Lake probably part of the same flock. (MJP, PT, PA). The only second winter period record related to 14 flying west over Blunham Lake on 14 December (PO). All sightings related to the Eurasian race *A. a. albifrons*.

Greylag Goose *A. anser* A single with White-fronts at Dunstable SW on 17 January and three at Cardington Airfield on 18th may well have been genuine wild birds. Elsewhere the main feral population at Harrold CP and Radwell GP averaged about 150 in the first winter period, rising to 300 plus in November, no doubt as a consequence of a good breeding season at these two sites. Stewartby and Brogborough Lakes had a single bird for most of the winter with a maximum of seven on 26 January. At Priory Park 10 were introduced on 3 May plus another five on 6th but the flock departed on 15 July, and at nearby Great Barford GP a high of 31 was recorded on 2 April. In the Ivel Valley four pairs fledged 14 young at Girtford GP with a flock



Bewick's Swans

(Peter Marshall)

of 160 at South Mills NR on 17 August and a maximum of 163 at Blunham Lake on 10 January.

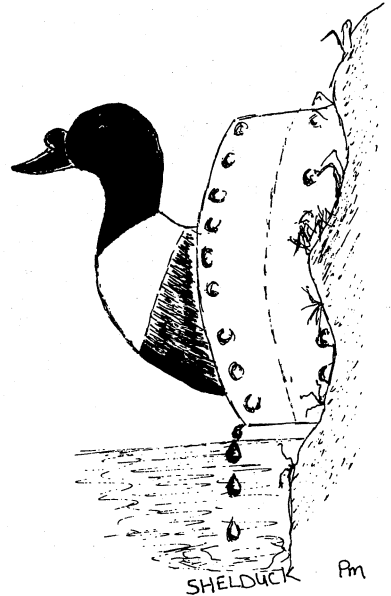
Grey Geese *Anser* sp. On 2 January 35 flew over Barton Hills, and at Stewartby Lake on 18th four were briefly seen overhead (DJO).

Canada Goose *Branta canadensis* Breeding was recorded at the following locations: Harrold CP; Radwell GP; Brogborough Lake, one pair; Rookery Pit; Chimney Corner CLP; Girtford GP, two pairs; Blunham Lake; Priory Park, one pair raised four young; Eversholt Lake, two pairs raised six young; Wrest Park, two pairs. During both winter periods good numbers were present on most of the Bedford Clay Pits, The Ouse, Ivel, and Ouzel river valley mineral excavations and the parkland lakes. Maximum counts recorded were as follows: Grovebury Farm Pit c400 on 20 September; Radwell GP 310 on 24 January; Harrold CP 200+ on 1 November; Brogborough Lake c360 on 30 September; Stewartby Lake 430 on 15 September; Luton Hoo 107 on 28 September; Chimney Corner CLP c100 on 23 August and 350+ at Rookery Pit on 13 September. The post breeding assemblies during August and September were most impressive as birds flighted in to feed on stubble at dusk, returning to the waters at dawn.

Brent Goose *B. bernicla* One on 25 January at Grovebury Farm Pit (PS) and another at Stewartby Lake on 31 March (DJO); both were of the nominate dark-bellied race *B. b. bernicla*.

Egyptian Goose *Alopochen aegyptiacus* At Radwell GP one from 1986 stayed until at least 3 January with another flying NE over Stewartby Lake on 11th, which was seen later the same day in Rookery Pit.

Shelduck *Tadorna tadorna* In the breeding season single pairs were present at four of the Bedford Clay Pits, and at one site in each of the Ouse, Ivel and Ouzel river valleys. At the Ouzel valley location the nest hole was unavoidably disturbed and the birds deserted; elsewhere no proof of confirmed breeding was noted. From January to February small numbers were seen at Stewartby Lake with a maximum of five on 11 January; at Dunstable SW a high of three on 26th, then two through to March; Blunham Lake, two on 10th; Priory Park, one on 11th and one at Radwell GP on 14 February. During March and April the main passage occurred across the county with all the main waters recording small parties; mainly pairs. Eight at Stewartby Lake on 28 April was the largest group followed by four at Priory Park on 5 May. Records were fewer in the latter months of the year but birds tended to stay longer, such as two at Dunstable SW from 4 October - 27 November. Five juveniles on Brogborough Lake on 27 September were also of note.



Shelduck

(Peter Marshall)

Mandarín *Aix galericulata* At the county's main locality, Woburn Park, a count of 45 was made on 17 January, mainly from the Basin Pond but also at the smaller ponds scattered throughout the park. No details on breeding success was recorded, although birds were present all year. At Eversholt Lake at least two pairs nested as a duck with three ducklings was noted on 27 June, with small numbers present between 22 March and 2 July. Luton Hoo also had birds present throughout a similar period culminating in confirmed breeding on 30 May when five young were seen. At Wrest Park presence was noted in March with two flying through woodland, plus several other sightings around the Park at that time, and breeding was thought possible. Priory Park held two males all year; South Mills NR had a female on 21 June; a male was at Blunham Lake on 18 October; with another at Radwell GP on 1 June and 15 November, and at Elstow CLP on 21 February. Strangest of all records was of two drakes on 12 May at Cardington feeding in a field on rotting potatoes!

Wigeon *Anas penelope* The main wintering site was as usual in the Radwell GP, Harrold CP area where a maximum of 357 were counted on 3 January, with the last bird seen on 13 April. Birds started filtering back from 13 September, rising to 158 by 28 December. Priory Park attracted good numbers in January with a peak of 90 on 25th; where also a duck was noted on 2 June, and an autumn high of 27 on 30 September. At Blunham Lake there were 52 on 10 January and 76 on 15 November, as nearby South Mills NR recorded a first for the site on 22 August when an eclipse male was seen. Stewartby Lake had 108 on 14 March and Brogborough Lake a maximum of 56 on 25 January. Fifty two were at Elstow CLP on 14 January and a count of 40 at Grovebury Farm Pit on 18 January was unusually high, with lesser numbers being recorded at the following locations throughout the winter months: Woburn Park, Luton Hoo, Battlesden Lake, Chimney Corner CLP, Rookery Pit, Coronation Pit, Lidlington CLP, Vicarage Farm Pit, Wyboston GP, Houghton Regis CHP and Dunstable SW.

Gadwall *A. strepera* At the main site for this species, Dunstable SW, birds were present all year with a first winter period maximum of 77 on 2 January and 81 during the second winter period on 16 November. Two pairs bred, hatching eight ducklings, although their eventual outcome was uncertain. The other stronghold, Blunham Lake, saw peaks of 66 and 58 on 2 January and 13 December respectively while at least one pair was present in April and May at South Mills NR. Luton Hoo recorded small numbers throughout the year except for 28 September when there were 59 and a pair was seen with young on 9 June. Two pairs were noted during the breeding season at Eversholt Lake. Elsewhere a scattering of records were received from the Bedford Clay Pits, the Ouse Valley Gravel Pits, Battlesden Lake, Woburn Park, Wyboston GP and Houghton Regis CHP.

Teal *A. crecca* Confirmed breeding was recorded at South Mills NR on 14 June when a female was seen with six ducklings. During the winter months a high of c40 was noted on 8 March and 24 on 4 December, with 27 at nearby Blunham Lake on 13th and 41 on 2 January. Radwell GP held birds in both winter periods with a high of 45 on 3 January, and 50 on 14 November. Dunstable SW had maximums of 25 on 19 January and 78 on 19 December with nearby Houghton Regis CHP recording 24 on 14 March. At Priory Park 35 was the winter peak on 19 December after a build up from mid-September while at Luton Hoo numbers built up likewise to 21 on 13 December. Elsewhere small numbers were noted at most of the county's lakes and pits, mainly through the winter months, and at Bramingham Wood, Luton a single female stayed for three weeks on the pond, constituting the first site record.

Green-winged Teal *A. c. carolinensis* On 12 April a male of the American race was seen at Radwell GP (MJP, DSW). This is the first record for Bedfordshire, and has been accepted by BBRC.

Mallard *A. platyrhynchos* First winter period counts were low this year with only 160 at Stewartby Lake on 31 January and 75 at Luton Hoo on 4th of note. A late summer build up was noted at several sites as 200 were recorded at Grovebury Farm Pit on 31 August and 550 at Harrold CP on 12 September with 405 on 13 December. Numbers increased elsewhere during December with c150 at Southill Lake on 20th; 134 at Luton Hoo on 13th; 80 at Houghton Regis CHP and 62 at Woburn Park on 29th. Breeding was widespread and the first brood of ducklings was seen at Stewartby Lake on 28 April. At Priory Park the number of young hatched was down by about 60% on last year and at the Woodland Trust's Bramingham Wood, Luton a clutch of 13 eggs was recorded although none hatched.

Pintail *A. acuta* As usual most records were from the first three months of the year the first being at Blunham GP from 12-25 January followed by another at Brogborough Lake on 15th and two on 22nd and 25th. The latter two were probably the same birds, both drakes, that appeared at Stewartby Lake and Millbrook Pit at various dates from 14-18 January. Back at Blunham Lake a total of five were noted on 4 February with a single at Luton Hoo from 10th-16th and another between 6-25 March. A party of four at Vicarage Farm Pit on 4 and 14 March were probably the same birds seen at Brogborough Lake on 10th with a single at Priory Park on 13th. The only summer record came from Harrold CP where there was a female on 20 June, and finally Dunstable SW had an immature male from 4-29 October.

Blue-winged Teal *A. discors* A female/immature at Dunstable SW on 11 October was the first record for Bedfordshire (PT, SW) and has been accepted by BBRC.

Shoveler *A. clypeata* As a wintering species numbers were down considerably at all sites with many waters having none at all in the second winter period. At Dunstable SW a count of 18 on 2 January was the maximum; breeding was suspected as birds were seen displaying into May when five drakes and a duck were noted on 29th, but no young were seen. Priory Park's top count was also 18, on 15 March, as lesser numbers were present for most of the year and at least one male summered. Luton Hoo held 23 on 27 January, with a male on 17 May, and breeding season males were also seen at Vicarage Farm Pit, Chimney Corner CLP, Radwell GP and Rookery Pit. Elsewhere small numbers were reported from a further seven widely scattered sites, mainly in the first winter period.

Red-crested Pochard *Netta rufina* A drake at Battlesden Lake on 3 January moved, during the freeze-up, to Brogborough Lake on 13th, returned to the former site from 22nd-31st and

reappeared at Brogborough Lake on 8 February (PS, TP, MJP). Another equally well recorded male briefly appeared overhead at Priory Park on 24 September and was found the following day at Harrold CP, where a different individual was noted on 25 October (DK, DHB, DSW).

Pochard *Aythya ferina* Numbers peaked in January at the Bedford Clay Pits with 185 at Brogborough Lake on 21st, 180 at Stewartby Lake on 18th and lesser numbers at Chimney Corner CLP, Elstow Pit and Vicarage Farm Pit, the last being on the 17 April at Brogborough Lake. Priory Park had a high of 82 on 15 February with lesser counts until 7 March, when numbers built up again from 18 June to 52 by 8 November. The smaller waters at Dunstable SW and Luton Hoo recorded maxima of 47 and 28 on 15 January respectively. A drake summered in the Ivel Valley and by the beginning of August numbers were beginning to build up again at the usual clay pits with 88 at Brogborough Lake by 13 December.

Tufted Duck *A. fuligula* Breeding was reported from the following sites: South Mills NR; seven pairs raised 16 fully fledged young, maximum brood — nine; Houghton Regis CHP a duck with seven young seen in July; Dunstable SW two pairs; Stewartby Lake, nine broods; Chimney Corner CLP, one duck with six young; Brogborough Lake, one pair and at Battlesden Lake where three pairs attempted without success. At the Bedford Clay Pits numbers during the first winter period were generally lower than usual due to the freezing over of many waters, but in the autumn at Brogborough Lake, the county's main wintering site, a massive 458 were counted on 28 December, (including three females with extensive white facial 'blazes') constituting the highest number ever recorded at one locality in Bedfordshire.

Scaup *A. marilla* A female at Brogborough Lake stayed from 14-19 January (DJO, MJP *et al*) with further sightings of probably the same bird at Millbrook Pit on 25 February (MJS) and the former site on 8 March. A duck occurred at Stewartby Lake on 30 September (DJO) with another at Priory Park between 18 and 22 November (DHB). Back at Brogborough Lake a female was noted from 19 December into 1988, where it was joined by an unusually marked immature male from 29th which also stayed into the new year (RAN, DJO).

Common Scoter *Melanitta nigra* An adult drake was at Wyboston GP from 20 January to at least 25th (MJP *et al*) with another at Brogborough Lake on 7 April (TD) followed by two males at Radwell GP on 26th (DSW). The only autumn sighting was of an immature/female at Lidlington CLP on 17 and 18 September (MJP).

Goldeneye *Bucephala clangula* Reported from 12 localities, mainly the Bedford Clay Pits, during the winter months, and two sites in the south of the county. The deep waters of Brogborough Lake consistently attracted good numbers from January until 17 April when the last three were seen. Throughout the first three months numbers averaged between 20 and 30, with a peak count of 39 on 15 February. Elsewhere lesser numbers were recorded at Harrold CP, Radwell GP, Priory Park, Elstow CLP, Stewartby Lake, Millbrook Pit, Steppingley Reservoir, Rookery Pit, Luton Hoo and Dunstable SW. By 18 October a single was back at Brogborough Lake as numbers steadily built up to 22 by the year's end. Stewartby Lake, Priory Park and Radwell GP all had single figure counts during this period and in the Ivel Valley a drake was sporadically recorded at South Mills NR between 14 November and 17 December.

Smew *Mergus albellus* One 'redhead' at Priory Park on 4 January (APC) followed by another at Stewartby Lake on 13th (DHB) and a drake at Brogborough No 2 pit, which later moved onto the main lake, from 15 February to at least 1 March (RAN, MJP *et al*). At Harrold CP and Radwell GP a female moved between the two sites from 9 February until 13 March (MJP, DJO).

Goosander *M. merganser* Recorded at 13 localities, mainly from January to April and again from November to December. The Brogborough/Stewartby Lake complex had small numbers from January with the last three at the latter site on 31 March. Radwell GP attracted more birds, particularly on 24 January when 11 were present, followed by a high of 13 by 6 February, decreasing gradually until the final 'redhead' on 14 April. Of note were 11 flying

along the River Ivel at Wyboston GP on 24 January; seven at Blunham Lake on 17th; three at Woburn Lake on 4th; and ones or twos at Dunstable SW; Luton Hoo, Grovebury Farm Pit, Priory Park, Elstow CLP and singles flying along the river at Kempston and Blunham. During the second winter period birds were noted from 13 November at Priory Park, with a maximum of seven there on 2 December and 12 were at Woburn Lake on 30 December.

- Ruddy Duck** *Oxyura jamaicensis* Breeding season records came from three localities as follows: Battlesden Lake had its first bird on 22 March, with two drakes on 28th and a duck on 25th April. By May a pair had established a territory and the female was sitting on 9th, when another pair arrived on 16th but were not subsequently seen, and no evidence of successful breeding was noted. Some of these birds probably dispersed to Dunstable SW which held a maximum of two between 3 July and 14 August. At Vicarage Farm Pit one pair bred — outcome unknown, and at Luton Hoo two males and a female were seen intermittently, between 7 May and 4 August plus a drake on 4 and 15 November. Stewartby Lake attracted one or two for most of January with three on 25th and probably the same birds at Elstow CLP on 13th and Brogborough Lake on three dates. Priory Park had a single on 8 February along with Radwell GP from 15-24 April and 8 November. In December Brogborough and Stewartby Lakes had up to two from 12th-25th.
- Marsh Harrier** *Circus aeruginosus* On 14 June a female/immature flew north over Bedford SW adjacent to Priory Park (DK). This is the first June date for this species; of the nine previous records since 1966, seven have been in May and one in August.
- Hen Harrier** *C. cyaneus* At Potton a 'ringtail' had been seen for most of the winter until 23 March (JC) and at Old Warden another female/immature was seen on 4-6 April (JTRS, KS, BN).
- Goshawk** *Accipiter gentilis* A pair were seen in suitable breeding habitat during April. At Whipsnade Zoo on 14 March a female was noted feeding on a freshly killed Moorhen; with another bird over Whipsnade Common on 28 July and 18 August. (CT, JC, RC).
- Sparrowhawk** *A. nisus* The increase in sightings continues with reports from every part of the county and in every conceivable habitat as diverse as the town centres of Bedford and Luton, the Lower Greensand woodlands and the Bedford Clay Pits. Evidence of breeding came from the following localities: Wrest Park, a female soaring in April; Luton Hoo, three or four pairs in breeding season; The Lodge, Sandy almost daily sightings, plus displaying; in TL05, a nest found in centre of wood; and in TL02 a pair raised three young. No doubt many more pairs went undetected. Outside the breeding season there were many sightings from all the well-watched wetland sites, plus, on a sadder note, the following two fatalities: a male found dead at Haynes was thought to have struck a TV aerial on 31 March and an immature died at Bromham on 7 September after flying into a greenhouse. Both specimens are now at Bedford Museum.
- Buzzard** *Buteo buteo* In the breeding season a pair probably bred in the south of the county as courtship display was witnessed from 25 April, with the final sighting on 12 July. At two other sites in mid-Beds birds were seen from April to August. On 23 April one flew over Charle Wood, followed by another over Kimbolton Road, Bedford on 5 August, one at Sheerhatch Wood on 19th, and another at Everton on 20 September. At Warden Great Wood two were noted on 29 September with one on 25 October, 13 and 20 December.
- Kestrel** *Falco tinnunculus* Commonly seen throughout the year in all habitats. In the parish of Everton three pairs bred, at Wrest Park a pair raised two young; three young fledged from a nest box at Grovebury Farm Pit and in TL05 a pair bred in the same tree as a Barn Owl.
- Merlin** *F. columbarius* One at Cardington Airfield on 2 January (MJP, DJO) and another at Brogborough No 2 Pit on 21 February (RAN). In the Ivel Valley one at Blunham on 16 October (JTRS) was possibly the same bird seen again at South Mills NR on 29 November and 25 December (PO, EN). Also in November one was seen at Rookery Pit on 1st (PT) with another near Flitwick on 15th (PSO). All sightings related to brown immature/female types.
- Hobby** *F. subbuteo* The first sightings of the year were at South Mills NR and Southill Park on 17 April, but the main arrival did not occur until the beginning of May. At Priory Park, where sightings were regular from 20 April, an adult was seen taking a bat at dusk on 30th,

more usual prey included hirundines at a roost at Brogborough Lake and a juvenile catching dragonflies in Rookery Pit, both in September. Breeding occurred at two localities, with one juvenile raised at one site but no details from the second. Records were received of single birds from most of the county's 10km squares during the summer months indicating a much higher breeding rate than was actually detected. The year's crop of juveniles from adjoining counties to the north was reflected in the number of birds migrating south in September along the watercourses and over the still waters. Priory Park, South Mills NR and the Bedford Clay Pits were particularly good sites to witness the exodus south and by the end of September most had gone. Two October sightings were at Moggerhanger on 5th and an injured bird that was taken into care at Whipsnade Zoo on 22nd.

Grey Partridge *Perdix perdix* A wide scattering of records from across the county; though particularly numerous along the chalk downlands and adjoining farmland, where a covey of 16 were regularly seen in the spring at Thorn, near Dunstable. In mid-county small numbers were noted on farmland in the Biggleswade area along with others in the larger clay pits such as Rookery and Coronation Pits and at Willington GP. In the mainly agricultural north of the county it still seems to be scarce with records received from only one site near Carlton.

Red-legged Partridge *Alectoris rufa* Widely distributed across the county's farmlands and quarries. The largest reported covey was of 15 near Millbrook Station on 17 January.

Quail *Coturnix coturnix* Two males calling at Stanbridgeford from 12 June, with three on 15th, were last heard on 12 July (PF, DT). At Honey Hill Farm, Bedford the following sequence of records was noted: one heard on 8 July to 13th, when one was seen in flight with another calling; on 29th the crop was being harvested and a male was out in the open calling while two others continued calling in the uncut section of the field. None were subsequently heard after harvesting. (DJO, MJP *et al.*)

Pheasant *Phasianus colchicus* Locally abundant particularly around the country estates.

Lady Amherst's Pheasant *Chrysolophus amherstiae* This species appears to be in decline at some of its former strongholds, partly caused by changing habitat but also the combined effect of a cold winter and wet spring. The Breakheart Hill complex at Millbrook had a maximum count of six birds on 11 January with five males calling in the breeding season. Maulden Woods, where they are notoriously difficult to see, had at least 10 calling in early May and one was also heard at Chicksands Wood on 19 April. Numbers were low at Charle Wood with a high of four on 4 May, but some birds had probably moved to nearby Lowes Wood where conditions were more suitable; one was seen on 8 February. Four were noted at Luton Hoo in January, but then only singles were seen from February to April. Although no details of population are known at Luton Hoo numbers were thought to have decreased and several dead birds were found in the first winter period. Please submit all records of this species in future as the situation undoubtedly needs monitoring closely.

Water Rail *Rallus aquaticus* Present throughout the year at Flitwick Moor and undoubtedly bred as birds were heard calling in April and May. Breeding season records also came from Luton Hoo, Battlesden Lake and Houghton Regis CHP. During the winter months it was slightly more widespread with reports from the following localities: Harrold CP, one on three dates from 1 November to 13 December; Stewartby Lake, one on 22 January and 1 November; Grovebury Farm Pit, one on 22 November; Battlesden Lake, one on 13 December; Houghton Regis CHP, one in January and November to December; Brogborough Lake, one on 25 January; Dunstable SW, one in January; Everton Ponds, one calling on 1 November; Priory Park, one on 22 November; South Mills NR, one on 28 October. On 28 March at Manor Farm House, Bolnhurst one died after flying into a window and is now preserved at Bedford Museum.

Corncrake *Crex crex* One calling at Ickwell Bury on 5 May (WEB) and another near Astwick on 16 May (MP).

Moorhen *Gallinula chloropus* A widespread resident with no large winter counts reported.

Coot *Fulica atra* Good counts were recorded on 17 January as part of the Wildfowl Trust's winter wildfowl count census at the following sites: Chimney Corner CLP 292; Stewartby Lake 394;

and Dunstable SW 173. In mid-December 203 were at Chimney Corner CLP; 310 at Harrold CP and 156 at Dunstable SW. Breeding was widespread throughout the county's wetlands.

Oystercatcher *Haematopus ostralegus* A very good year for this species commencing with one at Great Barford GP on 29 March - 2 April and then one at Priory Park on 5 and 6 April, one on 23rd and 28th; one at Stewartby Lake on 9-24 April and 16 October; a single on playing fields at Stockwood Park, Luton on 13 April; two in the Harrold CP/Radwell GP area between 4-17 May; two (possibly the previous birds) displaying in Rookery Pit on 31 May; one at South Mills NR on 27 May; a single at Chimney Corner CLP on 15 August; and finally a flock of 18 (the second highest number ever) at Dunstable SW on 24 December.

Little Ringed Plover *Charadrius dubius* Breeding details were received from the following areas: Bedford Clay Pits, at least four pairs summered; Ouse Valley, four pairs; Ivel Valley, three pairs with juveniles seen in June. This is a minimum figure as access is difficult to gain to some of the private clay pits. The first migrant was at South Mills NR on 11 March, but the main passage occurred from mid-April as small numbers filtered through most of the county's wetland sites; particularly in the clay pits and at Willington GP, Harrold CP, Radwell GP and South Mills NR where the last bird was seen returning south on 11 August.

Ringed Plover *C. hiaticula* As with the previous species breeding details were as follows: Bedford Clay Pits, seven to eight pairs, young seen at two sites; Ouse Valley, two to three pairs; Ivel Valley eight pairs, young raised. Two at Stewartby Lake on 12 February were the first of the year followed by one at South Mills NR on 14th with a peak of 15 there on 25 March. Passage was widespread during the spring, the following counts being of note: Stewartby Lake nine on 8 March, six on 10th and eight on 14th; Chimney Corner CLP 10 on 5 April. Autumn passage was light with the last three at South Mills NR on 22 August.

Dotterel *C. morinellus* At 0720 hours on 18 April a 'trip' of 10 were located on Blows Downs in exactly the same field as the previous year. The party consisted of four in full summer plumage, five in non-breeding and one in transitional plumage. They left together at 0827 hours. (PT *et al*).



Oystercatchers, Radwell GP, 17.5.87.

(Andy Chick)

Golden Plover *Pluvialis apricaria* The main wintering flocks were at Radwell GP where up to 2000 were present in January and at Cardington Airfield where a maximum count of 184 was made on 4th. Elsewhere 50 flew over Limbury Mead, Luton on 10 January; 40 were in fields near Hockliffe on 1 February; 20 flew over Stewartby Lake on 10 January, with a single trying to land on the ice on 25th, plus a party of 12 on 12 February and 90 flew south over Priory Park on 10 January. A strong spring passage was most evident as birds moved northwards to the breeding grounds. In the Ivel Valley, South Mills NR recorded a maximum of 18 on 17 March, with three summer plumage birds on 25 April and eight further north at Everton on 8 March. Counts of 16 and 17 were noted at Chicksands and Biggleswade Common on 15 and 11 March respectively. Along the chalk downs four flew over Blows Downs on 3 April; 22 over Barton Hills on 19th; one at Wardown Hill on 5th; and small parties filtered through Whipsnade Zoo between 10–25 March, the largest count, 31. The last spring birds were at South Mills NR on 25 April and the first autumn bird was there on 22 August. During the second winter period numbers gradually built up again at the usual haunts as 1250 were noted at Radwell GP on 28 December with smaller numbers at six other localities.

Grey Plover *P. squatarola* In May one over Priory Park on 9th (DK) followed by another at Chimney Corner CLP between 10th and 12th (MJP, DJO) and two at Rookery Pit on 16th (DT). At the latter site one was heard flying over in thick fog on 1 November (PT).

Lapwing *Vanellus vanellus* An impressive cold weather movement was recorded on 10 January at five different localities, involving many thousands of birds. At Priory Park 3120 were counted through in one hour, along with c400 over Elstow CLP; 50+ over Stewartby Lake; and in the south 'hundreds' were noted moving west at Luton Airport and 'thousands' over Barton Hills. Migrants returning east in March were particularly noticeable along the chalk escarpment at Blows Downs and Whipsnade Zoo. The return passage from the Low Countries commenced in early June and peaked over the first week of July when many thousands of birds could be found resting at the larger clay pits such as Rookery and Chimney Corner. Up to 2000 were noted at Great Barford in July and c1000 at Everton in September. Large numbers appeared again in the second winter period with between 3–4000 at Grovebury Farm Pit on 29 November and 2000 at Radwell GP in December. Breeding records came mainly from the clay pits and quarries with a very high density—20–30 pairs—holding territory at Rookery Pit. Nine pairs were also noted in six tetrads in the mainly agricultural TL05 10km square.

Sanderling *Calidris alba* A first winter bird stayed on the frozen River Ouse, mainly at Bedford town centre, from 12–18 January, and was probably at Priory Park on 11th (SA *et al.*). An adult at South Mills N.R. on 23 July (DHB).

Curlew Sandpiper *C. ferruginea* A moulting adult at South Mills NR on 13 August was the first record since 1981 (EN).

Dunlin *C. alpina* Reported at 12 localities with the first two at Elstow CLP from 11 January followed by up to three at Stewartby Lake and one at Brogborough No.2 pit intermittently until 17 March. A light spring passage was reported from Radwell GP, South Mills NR from the 11 April, maximum of three; Chimney Corner CLP maximum of seven on 25 May; Rookery Pit, maximum of 11 on 16 May; and Priory Park, high of three on 3 May. At South Mills NR, where singles were recorded throughout the summer, an unusually small bird appeared on 2–3 June, in broken moult, and was considered to be of the arctic race *C. a. arctica*, which breeds in NE Greenland. By late July/early August onwards migrants filtered through the afore-mentioned sites, plus Bedford and Dunstable SWs, the former site recording nine overhead on 21 July, the latter four on 8 October and six flew over Priory Park on 29 September. A single at Radwell GP on 8 November was the last record.

Ruff *Philomachus pugnax* During the cold spell two were at Stewartby Lake from 13 January with five between 17th–20th, the last sighting being on 2 February. The same birds were also seen feeding on the ice at Brogborough Lake and one was on the Ouse at Bedford on 14 and 15 January. Three were at Radwell GP on 14 February; followed by nine at South Mills NR on 23 March, where from 15–26 April 11 were found on nearby flood meadows. Rookery Pit



Sanderling on frozen R. Ouse, Bedford, January 1987.

(Photo: R. Dazley)

held one on 17 April and eight between 4 and 9 May. In the autumn there was one at Chimney Corner CLP on 31 August, another at Rookery Pit on 6 September and finally a single at South Mills NR on 4 October.

Jack Snipe *Lymnocyptes minimus* At the main site, Houghton Regis CHP, during the first winter period up to six were present with the last sighting on 20 April. Birds had returned by 21 November with a maximum of three, and single birds sightings until the years end. South Mills NR recorded a single on 11 October and three or four from mid-November to late December. Elsewhere one was at Stewartby Lake between 10-27 January and two were noted at Flitwick Moor the same month.

Snipe *Gallinago gallinago* 'Drumming' was noted at the following localities: South Mills NR, three pairs, one pullus ringed; Houghton Regis CHP two were present; Vicarage Farm CLP, one pair; Stewartby Lake, one pair; Rookery Pit, one or two and Willington GP one pair. Outside the breeding season small numbers were seen at many wetland sites, the following counts being of note: South Mills NR 72-74 in the first winter period, 50+ in second; Priory Park, 30 on 5 April; Radwell GP, c25 on 23 March c100 in December and Grovebury Farm Pit, 40 on 25 October. A single at Whipsnade Zoo on 8 March was the first site record.

Woodcock *Scolopax rusticola* 'Roding' was noted at the following, mainly Lower Greensand woodlands: Breakheart Hill (4); Moneypot Hill; Wavendon Heaths (3); Maulden Woods (3); Flitwick Moor; Wilstead Wood (2); Chicksands Wood (2); West Wood, Knotting (3); Warden Warren; The Lodge, Sandy; Potton Wood; Old Warden and on the downs at Deacon Hill. Wintering birds were at Luton Hoo, Henlow Camp, and The Lodge, Sandy where there were up to 10 on 20 November. At Priory Park on 29 October one was brought to the Wardens Lodge suffering from gunshot wounds, with another seen on 9 November and at Bromham on 11 April one was feeding under shrubbery in a back garden.

Whimbrel *Numenius phaeopus* The first at Priory Park on 19 April was early, followed by another overhead on 2 May and singles in flight at Flitwick on 13th; Stewartby Lake on 20th; South Mills NR on 21 July and three over Sandy on 14th. One at Stewartby Lake on 16 October coincided with the storm force winds.

Curlew *N. arquata* Recorded from 13 localities between 10 February at Luton Hoo and 27 October at Radwell CP, where three were noted. The main passage occurred in the spring with singles

at Houghton Regis CHP on 7 and 8 March; Tempsford on 8th; Luton Hoo on 7th; Rookery Pit on 15th; Totternhoe on 10th and 12th; Priory Park on 13th, and in April on 6th, 7th and 9th. Singles were at Harrold GP and Stewartby Lake on 9 April and one flew north over Blows Downs on 19th. Return passage commenced at South Mills NR on 28 June, followed by singles at Priory Park on 29th and three dates in August; at Blunham on 17 August; Dunstable SW and Everton on 31st; Kempston on 19 September; three at Rookery Pit on 27th; another at Dunstable SW on 16 October and one near Sutton on 22nd.

Spotted Redshank *Tringa erythropus* Late summer migrants occurred at the following three sites: Rookery Pit, two on 15 August three on 6 September and one on 12th; Dunstable SW, one on 31 August and 7 September and one at Stewartby Lake on 11 and 12 September.

Redshank *T. totanus* Records were received from 15 localities mainly from March to August with wintering birds in January and February at Whipsnade Zoo, Barton, Legrave Marsh, Luton, South Mills NR, Houghton Regis CHP and at the Stewartby Lake/Brogborough complex, where up to four birds were present, at times feeding on the ice. Passage was widespread in April with breeding details as follows: South Mills NR a maximum of 24 birds counted in April, seven-eight pairs rearing few young due to wet weather, two juveniles found dead on 28 June and a female 'controlled' on 21 April had been ringed at roost on Cliffe Marshes, Kent on 19 September 1982; Rookery Pit, at least five pairs young seen; Chimney Corner CLP three pairs but no sign of young; Houghton Regis CHP two present; Radwell GP, two pairs; and Vicarage Farm CLP, one pair with a juvenile on 15 May. Autumn passage was light with the last sighting at Houghton Regis CHP on 16 October.

Greenshank *T. nebularia* A very good double passage commencing with one at Stewartby Lake on 16 April followed by one at Chimney Corner CLP on 18th and another at Radwell GP on 25th. Then in May singles at Dunstable SW on 7th and 28th; Willington GP on 28th; Chimney Corner CLP on 9th, 18th and 24th; Blunham Lake on 1st; South Mills NR on 24th; Rookery Pit, 21st, 24th and 26th, Houghton Regis CHP on 30th and at Radwell GP on 10th with two on 16th. Autumn passage was noted at the afore-mentioned localities plus Priory Park, Sandy, Stewartby Lake and Everton, from 16 July, when three were at Radwell GP, until the last on 14 October at Dunstable SW. The open pits at Rookery, Willington and Chimney Corner attracted the majority of birds during the mid-August peak.

Green Sandpiper *T. ochropus* During the first winter period two were at Willington GP and one wintered along the brooks and ponds at Totternhoe, with single sightings at Blunham Lake on 16 January and Priory Park on 25th. A light April passage was noted at Willington GP, Radwell GP, Great Barford GP, Bedford SW and Chalton SW with the last, incredibly, at Kidney Wood, Luton on 22nd. A returning migrant was at South Mills NR on 14 June, followed by one at Rookery Pit on 28th. From late July until mid-September passage was continuous at most wetland sites; especially at Dunstable and Bedford SWs where up to three stayed on to winter at each site. Willington GP also had wintering birds and one was seen at The Lodge, Sandy in December.

Wood Sandpiper *T. glareola* An adult was at Harrold CP on 20 June (DSW) followed by two at Bedford SW between 22 and 25 July with three there on 24th (DK, MJP) and a single at Rookery Pit on 17 August (DT).

Common Sandpiper *Actitis hypoleucos* The first migrants arrived at South Mills NR and Grovebury Farm Pit on 18 April, and the following day at Stewartby Lake and Priory Park. Passage was then continuous across the county's wetlands until the end of May. Interestingly birds summered at the first two localities with a pair at Grovebury on 20 June and a single seen displaying at South Mills. Breeding was suspected at Stewartby Lake. From early July to mid-September a protracted passage set in as birds moved south through the clay pits and river valleys, peaking around mid-August. Bedford and Dunstable SWs attracted small numbers almost continually with a high of 12 at the former site on 4 September. At Radwell GP one was noted on 14 November with another, later still, on 28 December.

Turnstone *Arenaria interpres* Two at Radwell GP on 24 April followed by another two at Chimney Corner CLP on 9 May.

Grey Phalarope *Phalaropus fulicarius* One at Stewartby Lake on 21 and 22 June, probably in first

year non-breeding plumage was the first county record since 1885 (JJ, PS, MJP *et al*). The 'Great Gale' supplied the second record this century when a winter plumage bird stayed at Blunham Lake from 17-22 October (PH *et al*).

- Arctic Skua** *Stercorarius parasiticus* A party of eight, probably all adults, flew SW over Willington GP on 23 August, constituting the first, long awaited, occurrence of this species in Bedfordshire (DHB).
- Great Skua** *S. skua* In the wake of the gale force winds on 16 October, six were found on Brogborough Lake, declining to two later in the day; while two different birds at Stewartby Lake the same day stayed until early on the 17th. (DHB, MJP, BN, DJO, PA). A single moved south along the Ivel over Blunham Lake on 21 October (PO) completing an unprecedented series of records, considering there have only been three previous sightings this century.
- Skua** sp *Stercorarius* sp One seen pursuing Black-headed Gulls at Sandy allotments on 14 August was probably an Arctic/Pomarine Skua (JH).
- Mediterranean Gull** *Larus melanocephalus* A first winter bird found at Elstow tip on 6 January was present at least until 11th, feeding on the tip or the nearby clay pit (DJO, MJP *et al*). An adult was also seen at Elstow Tip on 22 January (DHB) followed by another at Houghton Regis CHP, in full summer plumage on 29 March (LC). A possible sighting at Sandy on 27 August was confirmed at South Mills NR when a first winter bird was noted on 3, 11 and 13 September (PO, EN). With only three previous records of this species since the first in 1982, the total now stands at seven.
- Little Gull** *L. minutus* An unprecedented year for this species, particularly in the spring, involving mainly adults at the following localities: Priory Park, four on 14 April followed by 29 on 22nd, two on 23rd, one on 25th, one on 23 June and in the autumn, eight on 19 September and two on 20th; Brogborough Lake, two on 17 April, one on 18th and 19th, two on 20th, one on 21st and on the 22nd at least 41 were present (involving 36 adults, one sub-adult and four immatures), 34-39 on 23rd, three on 24th, one on 25th and two on 26th; Stewartby Lake, one on 22nd June, 6 and 7 September three on 30th, and two on 27 October. Elsewhere one was at Rookery Pit on 7 June; another at Chimney Corner CLP on 24 and 26 July and 16 August; two at Grovebury Pit on 20 September; and one at East Hyde on 18 October. The mid-April influx at Brogborough and Priory were minimum counts but may well have involved many more birds as visible migration was occurring throughout the daylight hours. Good numbers were also recorded in adjacent counties during this period.
- Sabine's Gull** *L. sabini* A second winter bird was present at Stewartby Lake on 17 October, coinciding with 'hundreds' of others scattered across SE England in the wake of the 'Great Gale' on 16th. This is the first record for Bedfordshire (BN, MB).
- Black-headed Gull** *L. ridibundus* A survey of the Bedford Clay Pits revealed breeding at the following: Coronation Pit, c30 pairs counted on 7 June; Millbrook Pit, c20 pairs (three juveniles on 31 May) with one nest a metre off the water in a hawthorn bush, by 27 June c20 juveniles noted; Brogborough No.2 pit, one pair on 31 May; Rookery Pit one pair on 31 May. Colour marked birds were noted at Brogborough Lake in March and December, with three at Elstow and one at Dunstable also in December. These related to the activities of the Cambridge Gull Group who operate locally.
- Common Gull** *L. canus* Small numbers were noted on passage at Blows Downs in April and 240 were at Totternhoe on 7th. No accurate counts were received from the Bedford Clay Pit roosts.
- Lesser Black-backed Gull** *L. fuscus* Two pairs nested at Coronation Pit, outcome unknown. Passage was noticeable throughout the clay pits from late July, particularly at Chimney Corner and Rookery involving many birds of the Scandinavian race *L.f.fuscus*. A partial albino juvenile/first winter was noted at Stewartby Lake on 7 September and at Brogborough Lake on 20th.
- Herring Gull** *L. argentatus* An increase in sightings during October was a result of the gale force winds and on 13th a yellow-legged bird of the Mediterranean race *L.a.michahellis* was noted

at Brogborough Lake (DHB). Also at the latter site, on 20 September an adult with only a faint patch of black on the primary tips was noted and at Stewartby Lake on 30th a probable Herring X Glaucous was present (DJO).

Iceland Gull *L. glaucooides* A first winter bird was at Elstow Tip on 5 and 6 January, constituting only the third county record (DHB, MJP, DJO).

Glaucous Gull *L. hyperboreus* At least six different birds were recorded. An adult at Brogborough Lake on 14 January was presumably the same bird at Stewartby Lake on 16th. Similarly a first winter seen at Elstow Tip on 14 January was probably the same bird going to roost at Stewartby Lake on 25th (MJP). A summer plumage adult was at Stewartby Lake on 25 August (DJO). At Brogborough Lake in December an adult was seen on 13th, 28th and 31st with two first winter birds on 30th and one seen on 31st, making a total of at least three individuals (MJP, DJO, DHB).

Great Black-backed Gull *L. marinus* No large counts received although small numbers present in both winter periods at the Bedford Clay Pits and Refuse Tips.

Sandwich Tern *Sterna sandvicensis* One over Houghton Regis CHP on 4 April (NRF) followed by three at South Mills NR on 26th (EN). On return passage an unprecedented party of 29 immatures arrived at Priory Park at 0945 hours on 22 August, remaining for five minutes before moving off SE(DK), with a single in the afternoon. Finally an adult was at Grovebury Farm Pit on 20 September (PS).

Common Tern *S. hirundo* The first three migrants arrived at Priory Park on 10 April and were then regularly seen there and across the county's wetlands from late April to mid-May. Ten was the highest spring count at Stewartby Lake on 2 May. Breeding season details were as follows: Harrold CP, at least 10 pairs raised 15-20 young; Radwell GP, two pairs attempted, outcome unknown; South Mills NR, one pair nested, eggs flooded in mid-June; Brogborough No. 2 Pit, one pair; Rookery Pit, two pairs one juvenile seen; Millbrook Pit, two pairs attempted but failed, probably due to Black-headed Gull predation; Grovebury Farm Pit, (where an artificial island was created) a pair nested with three eggs on 28 June, three downy chicks on 12 July, seen again on 18th but not again when adults showed signs of distress, possible cause of death Grey Herons, adults remained until 16 August. The usual widespread protracted passage south was noted from mid-July with the following peaks of note: Harrold CP c40 on 20 July; Stewartby Lake 12 on 23rd and 20 on 2 August; South Mills NR 12 on 8 July; Priory Park 16 on 10 July with the last bird there on 23 October.

Arctic Tern *S. paradisaea* One at Priory Park on 19 April; two at Harrold CP on 16th, one at Brogborough Lake on 20th and five at Stewartby Lake on 2 May, two on 10th and five on 14th. Return passage was noted at South Mills NR with two on 30 July and at Stewartby Lake in August with three on 23rd. A storm blown bird was seen flying up the New Cut, Priory Park on 16 October.

Little Tern *S. albifrons* One at Stewartby Lake on 7 September was the only record (MJP).

Black Tern *Chlidonias niger*. Spring passage commenced with one at Brogborough Lake on 18 April, five on 24th, 30 on 28th and four on 10 May; Stewartby Lake, six on 28 April, one on 1 May, two on 8th and three on 17th; Priory Park, three on 22 and 26 April, one on 27th, two on 29th and eight on 10 May; Harrold CP held 10 on 29 April and two on 1 May with three at Radwell GP on 25 April and finally one at South Mills NR on 24 May. Priory Park had the first autumn record on 13 July and the last on 30 September with a flock of 20 on 19th, when 21 were also noted at Dunstable SW. Stewartby Lake recorded small numbers from 23 August to 20 September with a peak of 18 on 25 August and eight on 23 September.

Feral Pigeon *Columba livia* No detailed counts received but 'several hundreds' were noted feeding on fields in the Warden Hills area during the first winter period.

Stock Dove *C. oenas* A count of 200 at Luton Hoo on 2 January plus 20 at Willington Wood on 5 July.

Woodpigeon *C. palumbus* A leucistic bird was seen at Everton on 8 June. A large winter period roost in the woods around Caddington contained 'several thousand' birds.

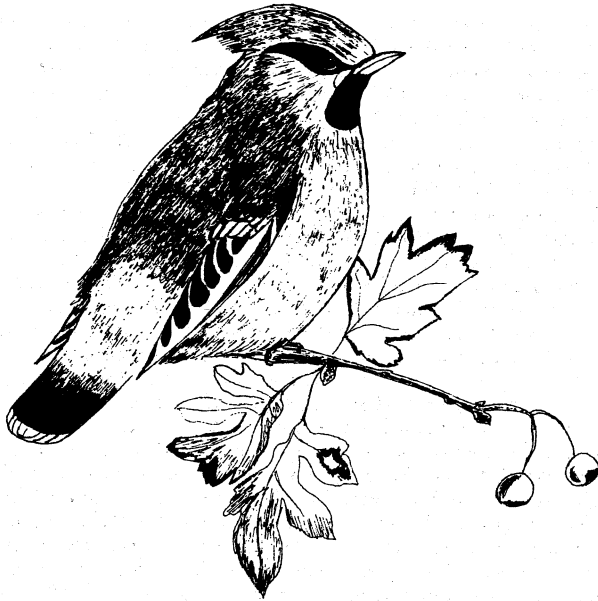
Collared Dove *Streptopelia decaocto* Large numbers were reported in north Luton on 17 January, 34 were at Barley Brow, Dunstable on 15 April and 35 at Brogborough Lake on 30 December.

- Turtle Dove** *S. turtur* The first and last migrants were at Stewartby Lake on 17 April and 13 September respectively. During the spring the main arrival was in the first week of May, but breeding numbers continued to spiral downwards. The Old Warden CBC plot recorded only two pairs, a new low, compared to 30 pairs in 1975, and at The Lodge, Sandy the situation was likewise with only one pair breeding. Several other observers remarked on the scarcity of this once abundant summer visitor.
- Ring-necked Parakeet** *Psittacula krameri* One flying over Cotton End on 26 October with one (possibly the same) also in flight at Chicksands Wood the same day, plus a single over The Lodge, Sandy on 4 December.
- Cuckoo** *Cuculus canorus* The first and last records occurred at Priory Park on 16 April and 31 July respectively with five there on 18 June. Breeding numbers were stable at the Old Warden CBC plot and a juvenile was seen being fed by a Reed Warbler on 27 July at Bromham.
- Barn Owl** *Tyto alba* During the breeding season recorded at: Willington Dovecote, two juveniles ringed; Shuttleworth College, juveniles seen on the wing; SP93, a pair nested in an old tree; TL01, single bird noted; TL04, a pair bred in hole of a dead tree and were seen taking prey into the nest in June; TL15 a pair were noted until mid-June; and in TL05 in August and September a 'screeching' juvenile kept one lucky observer awake at night! Winter records were received from Whipsnade Zoo, where one roosted temporarily in a bus shelter; Brogborough No. 2 Pit, again a roosting bird; Pegsdon, Westoning, Thorn, The Lodge, Sandy and at Clophill, although the latter may have escaped from a local aviculturist.
- Little Owl** *Athene noctua* Recorded from 40 widely scattered localities with a noticeable bias towards the more open, worked quarries, but also from agricultural areas and parkland. Confirmed breeding was noted at: Woburn Park, two young; Dunstable SW, adult entering nest box with prey; Battlesden, pair bred in an old oak tree; South Mills NR, young seen in August; Old Warden, two pairs bred; and in TL04 a pair bred in a small tree 15 feet away from a pair of Barn Owl.
- Tawny Owl** *Strix aluco* Widespread distribution across the county's woodlands and parks. Roosting birds were located at Whipsnade, Bramingham Wood and Rotten Corner, Leagrave.
- Long-eared Owl** *Asio otus* Breeding season records as follows: TL14, one site an adult seen carrying food to at least one juvenile and at a second site a bird was noted in July; TL13, a pair successfully fledged three juveniles. Elsewhere a winter roost at Priory Park held up to three birds by the end of March, with at least one present from 27 December 1986 until 6 April 1987; TL15, two in February, The Lodge, Sandy, two on 6 February, TL01, eight at roost February to March and in TL13 one or two all year at breeding site, plus a roost of two at another locality in January. On a sadder note one was found dead on the B1040 north of Potton in April.
- Short-eared Owl** *A. flammeus* In the Millbrook/Lidlington area at least two were present all year and breeding was suspected. Sightings, of presumably the same birds, were noted at Stewartby Lake and Vicarage Farm CLP. Elsewhere, in TL13 up to eight birds were reported at a roost site and at South Mills NR one was seen on 9 April.
- Nightjar** *Caprimulgus europaeus* A single migrant at Kensworth on 8 May was the only record, despite a thorough search of all former, and potential, breeding localities.
- Swift** *Apus apus* Priory Park and The Lodge, Sandy noted the first on 28 April with the main passage from the beginning of May across the county. The former site had hundreds all month with c250 on 17th and c700 at Dunstable SW on 25th. Breeding success was considered to be poor, owing to the cool summer, but 20 pairs nested under eaves at St Andrews Church, Langford. Return passage was most evident in August, particularly at South Mills NR and over the downs at Kensworth, with the final sightings at Carlton and Woburn on 6 September.
- Kingfisher** *Alcedo atthis* Reported from 19 localities throughout the year, similar to 1986, with confirmed breeding at four sites. Juveniles were ringed at Heath and Reach and South Mills NR. Many records were received in the autumn as a post breeding dispersal of immatures occurred, with back garden sightings from Bedford and Luton in September and October respectively.

- Wryneck** *Jynx torquilla* One at Old Warden on 20 April (WEB). In the autumn a single at Houghton Regis CHP on 29 August (NRF) with another at Toddington from 12-13 September, which fed on ants in a back garden at Chapel Close (MS).
- Green Woodpecker** *Picus viridis* Widely reported, particularly along the Lower Greensand Ridge woodlands and Woburn Park. Outside the breeding season a scattering of records from the Bedford Clay Pits.
- Great Spotted Woodpecker** *Dendrocopos major* Recorded widely across the county with individuals visiting bird tables in Luton during the cold spell and a pair noted displaying at Blunham on 9 January when the daytime temperature was -7° Centigrade!
- Lesser Spotted Woodpecker** *D. minor* Noted at 18 localities with juveniles seen at Everton and Priory Park. Along with the previous species two were seen displaying at Blunham in low temperatures in January.

Passerines

- Skylark** *Alauda arvensis*: Cold weather flocks during January of c120 at Millbrook, 111 at Marston Moretaine and 94 near Stewartby Lake. Autumn passage noted at Dunstable SW, Harrold and South Mills NR in September and at Everton in November.
- Sand Martin** *Riparia riparia* First noted at South Mills NR and Radwell GP on 28 March with a steady passage throughout April involving only small numbers. Breeding details as follows: Aspley Heath 65 nest holes in use; Grovebury Farm Pit, 70 pairs; Leighton Buzzard Golf Course 30 pairs; Churchways Pit, Heath and Reach 40 pairs; Willington GP two colonies of 21 and 22 pairs; Radwell GP, two-three pairs attempted but were unsuccessful. The final migrants were at Dunstable SW on 7 October.
- Swallow** *Hirundo rustica* First spring sightings came from Felmersham NR and Radwell GP on 28 March with the main passage between mid-April and mid-May. Late summer roosts were noted at South Mills NR c600; Radwell GP c1000 and Brogborough Lake. Return passage lasted well into October and a late straggler was at Blunham on 18 November.
- House Martin** *Delichon urbica* The first at Blunham Church on 28 March was early, followed by the main passage in mid-April. Breeding numbers were considered to have been lower than usual but a colony of 30 nests was reported from Everton. Return migration was obvious over Dunstable in early September and at South Mills NR c30 per hour were moving south on 14 October with 40+ along Blows Downs on 25th. Late birds were still at Sandy on 17 November and the final sighting was at Bedford Park on 21st.
- Tree Pipit** *Anthus trivialis* The Lodge, Sandy reported the first on 13 April, followed by two on Warden Hills on 14th, with the main arrival in the first week of May. Breeding records came from 11 sites on the Lower Greensand Ridge and two on the chalk downlands; with at least 10 pairs in the Aspley Heath complex, typical of the good numbers present this year. Returning migrants were noted over Whipsnade Downs on 14 September and finally over Hockwell Ring, Luton on 13 October.
- Meadow Pipit** *A. pratensis* The now regular mid-March to mid-April passage was noted at Priory Park, Blows Downs and Grovebury Farm Pit and involved up to 100 birds per day at the former two sites. Reports of breeding came from the Bedford Clay Pits, downlands and adjacent farmland to the north around Luton and Leighton Buzzard. An autumn movement was noted from late September and on 11 October at Blows Downs (c100), Priory Park (60 south), Grovebury Farm Pit (40), followed by a steady passage over Luton on 13th, South Mills NR and at Everton from 22nd. Up to 70 were on the filter beds at Dunstable SW on 13 November and garden visitors were noted at Bedford in the winter months.
- Water Pipit** *A. spinoletta* One in partial summer plumage at South Mills NR from 17-21 April (EN).
- Rock Pipit** *A. petrosus* A single at Radwell GP between 29 March and 5 April was the first since 1983 (DHB, MJP, DSW, DJO).
- Yellow Wagtail** *Motacilla flava* Two at Stewartby Lake on 5 April were the first, followed by birds at Radwell GP and Priory Park the next day. Passage was continuous at many wetland sites



Waxwing

(Peter Marshall)

throughout April and early May with peaks of 62 at Stewartby Lake on 20 April and 32 at Priory Park on 18th. Breeding was noted along the river valleys and on farmland in the north. Autumn passage occurred from late July to early October peaking in mid-September with 80-100 at South Mills NR on 16th, before the last sightings at Priory Park and Dunstable SW on 11 October. **Blue-headed Wagtail** *M.f. flava* One at Blunham Lake on 11 April followed by one at South Mills NR from 30 April-May and again between 10-14 June.

Grey Wagtail *M. cinerea* Recorded at 20 localities mainly between January and March and from mid-August onwards with a distinct passage in late September. Breeding season records came from Heath and Reach, where a pair summered, and Luton Hoo where nest building was observed in April.

Pied Wagtail *M. alba*. Roosts of note included c150 at East Hyde SW in January to February and up to 50 on office roofs in Ampthill in October. Numbers of passage migrants were down in the spring at Priory Park and Stewartby Lake with a 20 per day maximum. **White Wagtail** *M.a. alba* Continental birds appeared as follows; Radwell GP, one on 29-30 March and 19 April; Harrold CP, one on 2 April; Stewartby Lake, singles on 6th, 8th, 11th, 19th-22nd, with two on 23rd; Priory Park, one on 20th and 22nd and South Mills NR one on 28th.

Waxwing *Bombycilla garrulus* One briefly seen in a Luton garden on 21 January (JJT) was closely followed by another also in a garden, at Sandy on 22nd (RSPB, MJP) with a third at Ampthill, yet again in a well-wooded garden, from 14 February to at least 1 March (DCS, PT). These are the first records since 1975.

Wren *Troglodytes troglodytes* Both CBC plots showed dramatic increases from 1986 with 34 pairs at Old Warden (up 22) and 27 pairs at The Lodge, Sandy (up 20).

Dunnoek *Prunella modularis* The Lodge, Sandy recorded a slight increase in breeding numbers and at the Old Warden CBC plot 37 pairs bred, about the same as 1986.

Robin *Erithacus rubecula* The breeding status at both Old Warden and The Lodge, Sandy remained stable.

Nightingale *Luscinia megarhynchos* An extremely early record was received of one singing at Tebworth on 7 April before the main arrival from 17th onwards at Southill Park and along the Lower Greensand woodlands. In May singing males were noted at the following localities: The Thorns, Everton (7-8), Potton Wood (8-9), Wilstead Wood (2), Maulden Woods (2), Old Warden (2) Home Wood (2), St Johns Wood, Little Barford (3) and West Wood, Knotting (1-2). One was also heard briefly at Marston Thrift on 2 August.

Bluethroat *Luscinia svecica* One was seen in Luton on 28 May and coincided with an influx on the East Anglian coast (MPH). This is the first Bedfordshire record.

Black Redstart *Phoenicurus ochruros* An adult male was at Kempston on 11 January. In the spring a female at Houghton Regis CHP on 29 March was followed by another at Luton Airport on 4 April and Blows Downs on 5th, with a pair in Luton on 15th and 16th.

Redstart *P. phoenicurus* Spring passage at Blows Downs commenced with one on 17 April followed by two on 19th, one on 20th, two on 21st and one on 23rd. Elsewhere on 19 April singles were at Bramingham Wood, Luton and Priory Park, with one at Stewartby Lake on 8 May, Barton Hills on 13th and at Whipsnade Zoo on 16th. The only breeding record came from the Aspley Heath complex where, despite appalling weather, a pair fledged three young. Return passage was noted in September, all singles, at Blows Downs on 1st and 4th, Dunstable SW and Barton Hills on 6th, with the last at Whipsnade Zoo on 23rd.

Whinchat *Saxicola rubetra* At Blows Downs two on 19 April were followed by another on 26th and then on several dates in late April to early May, which was the main arrival period. Elsewhere mainly singles were seen at Priory Park, Brogborough Lake, Stewartby Lake, Potsgrove, Whipsnade Zoo, Pegsdon Hills, Willington GP, South Mills NR and Dunstable SW. Breeding was suspected at one locality as a bird was seen in suitable breeding habitat in June. A protracted, widespread return passage commenced from late August to early October peaking around mid-September when up to seven were at Dunstable SW with the final sighting at Shillington on 25 October.

Stonechat *S. torquata* A poor year with one at Houghton Regis CHP on 4 April, two at Rookery Pit on 4 October and a single at Dunstable SW on 25th.

Wheatear *Oenanthe oenanthe* At the Blows Downs Migration Watchpoint, where daily coverage was maintained during the spring the first bird was noted on 22 March with a continuous passage from 28th to 8 April when good numbers occurred in two distinct waves. The first peak was on 29 March followed by a much stronger movement on 5 April when between 20-30 were present. A third wave involving less than 10 per day, was noted around 19-20 April with the final sighting on 3 May. The influx on 29 March must have involved many birds across the county as numbers were recorded at Grovebury Farm Pit, Battlesden, Radwell GP, South Mills NR and Whipsnade Zoo. Again on 5 April, the second wave, reports came in from over 10 localities where up to 10 birds per site were present. On 14 May a bird of the Greenland race *O. o. leucorrhoe* was noted at South Mills NR. Breeding occurred at one site in the Bedford Clay Pits (juvenile seen), with a recently fledged juvenile noted at Bromham in July. Return passage commenced in mid-August, peaking in September, with a Greenland race bird on 24th at Dunstable SW, before the last one at Flitwick on 1 November.

Ring Ouzel *Turdus torquatus* Three on 28 March at Blows Downs were the first of a passage that involved birds on 16 days until 29 April. There were two waves: the first between 28 March and 8 April maximum of 5 on 5 April, the second from 17-29 April, with a high of four on 23rd. Elsewhere singles were noted at: Bison Hill, 30 March and 27 April; Warden Hills, 5 April; Barley Brow, Dunstable, 5th; Houghton Regis CHP, 14th; Southill and South Mills NR on 17th; and three at Pegsdon on 22nd. A male at Whipsnade Zoo on 22nd and 23rd September was the only autumn record.

Blackbird *T. merula* At the two CBC plots at Old Warden and The Lodge, Sandy numbers were stable. A late autumn influx was noted at Blows Downs, up to 100 on 29 November; up to 50 at Houghton Regis CHP all month and 40+ at Wrest Park in December.

- Fieldfare** *T. pilaris* The only large flocks reported during the first winter period were at Brogborough where 200+ fed on windfall apples, c200 at Everton on 7 March and 176 at Totternhoe on 6 February. A light April passage was noted, particularly along the downs, with the final migrant at Blows Downs on 9 May. Two at South Mills NR on 30 September were the first to return, but the main passage was not until November when 375 moved SW over Priory on 11th, 250 were at Battlesden Lake on 15th and over 200 were noted at Cople going to roost.
- Song Thrush** *T. philomelos* A slight increase was registered at both CBC plots, but numbers were still down, compared to 10 years ago. Autumn passage was noted at Everton between 18 September and 20 October and on Blows Downs.
- Redwing** *T. iliacus* Numbers were low in the first winter period everywhere with no reports of flocks of more than 70 birds. Spring passage was virtually non-existent and the final bird was at Blows Downs on 30 April. A single over Priory Park on 29 September was followed by the main passage in October and November, but once again only involved small flocks. A bird of the Icelandic race *T. i. coburnii* was ringed at Waterloo Thorns, Everton in October.
- Mistle Thrush** *T. viscivus* Post breeding flocks were noted as follows: Wrest Park, 49 on 22 September; Everton, 25 on 30 July; Bushmead Manor, 20 on 10 October and up to 50 at Vauxhall Park, Luton on 3 August.
- Grasshopper Warbler** *Locustella naevia* The first was at Aspley Heath on 16 April followed by three at Southill the next day. The main arrival took place a week later and by the end of May singing males were reported from 17 localities mainly along the Lower Greensand Ridge, but also from the more open clay pits. One by the Ouse west of Bedford on 10 July was the last record.
- Sedge Warbler** *Acrocephalus schoenobaenus* Priory Park had the first and last migrants on 10 April and 23 September respectively with 26 males holding territory during the breeding season. Elsewhere the main arrival was around 20 April. Away from the wetlands migratory birds were noted at Blows Downs and Fountains, Blunham on 18 April, and in a wood at Shuttleworth College on 15 July.
- Reed Warbler** *A. scirpaceus* The first at Brogborough Lake on 14 April was followed by one at Priory Park on 21st and then widespread by the beginning of May, with a migrant in a back garden at the foot of Blows Downs on 26th. Breeding records came from 12 localities including 41 singing males along the Ouse from Wyboston Lakes to Tempsford (MIE) and a juvenile Cuckoo was seen being fed by this species at Bromham on 27 July. The last sighting was, typically, at Priory Park on 20 October.
- Lesser Whitethroat** *Sylvia curruca* First at Blunham on 16 April with the main arrival by the month's end. Good numbers bred this year and the usual later summer influx of passage birds was noted at many sites and even through urban areas. The last was at Whipsnade Zoo on 16 September.
- Whitethroat** *S. communis* The first at Brogborough Lake on 11 April was early with the main arrival from 19th at Blows Downs and Priory Park. Breeding numbers appeared to be stable and the last migrant was at South Mills NR on 10 October.
- Garden Warbler** *S. borin* One at Kidney Wood, Luton on 18 April was the first with the main arrival a week later. Data from the CBC plots showed an average breeding season and a September passage was noted at Blows Downs and South Mills NR with the final bird on 8th at Whipsnade Zoo.
- Blackcap** *S. atricapilla* First winter period records came from Luton, Dunstable, Barton and Shefford and again in Luton in December. Spring migrants arrived from mid-April with the last at Priory Park on 10 October.
- Wood Warbler** *Phylloscopus sibilatrix* A male at Old Wavendon Heath on 29 April was first, followed by one at Studham on 3 May, Whipsnade Zoo on 5th and up to two between 6th-16th at Kidney Wood, Luton. At Old Wavendon Heath a pair raised three young, with another pair present, and at Charle Wood a male held territory. Unusually two autumn migrants were noted; one at Whipsnade Zoo on 22 July followed by another at Battlesden Lake on 8 August, which was part of a mixed passerine flock.

- Chiffchaff** *P. collybita* Wintering birds were at Priory Park and Blunham in January and February, with the first migrant at Blows Downs by 26 March and many more across the county over the following week. Breeding numbers continued to be low on both CBC plots at Old Warden and The Lodge, Sandy. The last migrant was at Stewartby Lake on 16 October with an unusual individual on 6 December showing characteristics of the northern race *P.c. tristis*.
- Willow Warbler** *P. trochilus* Houghton Regis CHP had the first on 31 March with the main arrival in mid-April. Breeding numbers appeared to be normal at the CBC plots and the last migrant was at South Mills NR on 10 October.
- Goldcrest** *Regulus regulus* Spring passage at Blows Downs was non-existent for the first time since detailed records were kept in 1980. Breeding numbers were stable at Old Warden and The Lodge, Sandy. Autumn passage was of note, particularly in October/November at Blows Downs, Whipsnade Zoo and South Mills NR.
- Firecrest** *R. ignicapillus* One at Flitwick Moor on 9 February was the first ever winter record in Bedfordshire (RAS). More typical was a singing male at Aspley Heath on 26 April (PS).
- Spotted Flycatcher** *Muscicapa striata* Blows Downs recorded the first on 5 May, which was early, but the main arrival was not until the end of the month. Breeding figures from the CBC plots remained average, although fledgling success was considered to be low everywhere due to the cool summer. A good September passage was noted at South Mills NR with the final one at Whipsnade Zoo on 25th.
- Pied Flycatcher** *Ficedula hypoleuca* Kidney Wood, Luton attracted different males on 17, 21 and 26 April followed by a female on 6 May (JIT, JBT). A male was on Blows Downs on 20 April (DT, RD) with a female at Whipsnade on 29th (CT, RC). One at Stewartby Lake on 18 September was the only autumn record (PSO).
- Bearded Tit** *Panurus biarmicus* A male and female at Stewartby Lake on 27 October were the first since 1984 (DHB).
- Long-tailed Tit** *Aegithalos caudatus* Breeding figures remained stable at two CBC plots at Old Warden and The Lodge, Sandy.
- Marsh Tit** *Parus palustris* Recorded from 20 localities across the county. CBC results from Old Warden showed an increase to nine pairs, the highest since recording began.
- Willow Tit** *P. montanus* Noted at 12 localities throughout the year with Maulden Woods and Flitwick Moor particularly favourable locations.
- Coal Tit** *P. ater* CBC figures showed a stable breeding population and South Mills NR recorded its first ever bird on 18 July.
- Blue Tit** *P. caeruleus* 45 pairs bred in nest boxes at The Lodge, Sandy and at Old Warden breeding numbers rose from 31 pairs to 42.
- Great Tit** *P. major* The Old Warden CBC plot recorded its highest ever number since 1973 at 27 pairs, while The Lodge, Sandy had 25 pairs in nest boxes.
- Nuthatch** *Sitta europaea* Data from the CBC plots showed a slight increase in numbers, most records came from parkland sites.
- Treecreeper** *Certhia familiaris* One was found dead on 29 November at Aspley Guise following a cold night. Breeding population stable.
- Jay** *Garrulus glandarius* Particularly abundant along the Lower Greensand Ridge woodlands, from where most records were received.
- Magpie** *Pica pica* Up to 100 at the Dunstable Downs roost in December.
- Jackdaw** *Corvus monedula* An albino was at Howbury Hall, Bedford on 8 June. The largest flock reported was 350 near Shefford on 18 August.
- Rook** *C. frugilegus* Flocks of note included 450 at Totterhoe in December, 250 near Broom in June, 195 over South Mills NR in September and 150 at Maulden in September.
- Carrion Crow** *C. corone* No detailed counts except for 80 on Bison Hill in May. One was seen to kill, and feed, on a half-grown rabbit at Woburn on 15 March and a 'pied' variety was noted near Caddington on 15 June.
- Starling** *Sturnus vulgaris* No large flocks reported. One with a long 'Curlew' type bill was noted at Bedford on 3 September.

House Sparrow *Passer domesticus* A flock of 300 was recorded at Stotfold on 6 October.

Tree Sparrow *P. montanus* The largest flocks recorded were up to 100 at East Hyde in August and September, 30+ at Warden Hills in April and c20 at Blunham in January and Mansgrove Farm, Studham in April. Lesser numbers were noted at Galley Hill; Battlesden Lake; South Mills NR; Millbrook Pit; Dunstable SW; Eaton Bray; Willington Woods; Bramingham Wood, Luton; and Priory Park. The Lodge, Sandy and Old Warden CBC plots recorded a total absence of birds in the breeding season, although a small colony was located at Studham on a farmland plot at Mansgrove Farm. Significantly the majority of the aforementioned sites are well watched and therefore bound to turn up the occasional bird, but most are unsuitable for Tree Sparrows in the breeding season. One observer (MIE), undertaking a botanical and habitat survey of the county, visited many sites that birdwatchers rarely go to, namely farmland, and recorded Tree Sparrows in small numbers, at 12 localities between 27 April and 29 July as follows: Wood End, Thurleigh(2); Wilden(1); Tilwick Farm, Cross End(2); Little Barford(5); Tempsford(13); Gibraltar Farm, Tempsford(8); Everton(1); Hazel Hedge, Everton(3); South Mills NR(6); Aspley Guise(5); Lower Stondon(3); and Great Barford(5). He noticed a vague correlation between this species' presence and 'old' buildings, most nest sites were in old farm buildings, barns and dead elms and commented on the Tree Sparrows' disappearance from August onwards. So the message must be, for the forthcoming Breeding Birds Atlas Survey, do not neglect old farm buildings and dead trees in the more agricultural areas of the county.

Chaffinch *Fringilla coelebs* Winter flocks of 100 in January at Luton Tip and up to 300 at Deacon Hill in November. On 11 October a steady passage of birds west was noted at Dunstable SW and Priory Park.

Brambling *F. montifringilla* In the first winter period small numbers were noted at Cardington; Whipsnade Zoo; Millbrook Pit, maximum of 12; Dunstable SW; The Lodge, Sandy; Blunham, up to 20; Rotten Corner, Luton; Luton Tip; Bramingham Wood, Luton; and Ampthill Park. By 3 March 163 were at roost at The Lodge, Sandy with three adults singing in April. A late March/early April passage was noted at Blows Downs; Whipsnade Zoo; Harrold GP; Chicksands Wood; Houghton Regis CHP; Old Warden and lastly 10 at Kidney Wood, Luton on 24 April. Three over Dunstable SW on 11 October were the first to return followed by up to four at Whipsnade Zoo from 25th to 13 November. In December several were at The Lodge, Sandy and Deacon Hill.

Greenfinch *Carduelis chloris* The only large flocks noted were c200 at Clophill on 26 October, 150 at The Lodge, Sandy in January and up to 100 at Wrest Park on 9 November. CBC data showed breeding numbers to be stable although still well down on 10 years ago.

Goldfinch *C. carduelis* At the Old Warden CBC plot only three pairs bred, the lowest since recording began in 1973. Post breeding flocks of note included 56 at Kempston on 26 September and 60 at Priory Park on 19th.

Siskin *C. spinus* Small numbers recorded at 18 sites in the winter months with the largest flock at Flitwick Moor in January totalling up to a 100. Singing males were noted at Moneypot Hill on 17 April and Rowney Warren on 26th. Whipsnade Zoo noted the first returning birds on 14 September, but most did not arrive until November and then numbers were low.

Linnet *C. cannabina* From a peak of 26 pairs in 1975, at the Old Warden CBC plot, numbers have declined to just one pair this year. The only flock of note was one of c100 at Everton in February.

Redpoll *C. flammea* The largest flocks were 314 at Luton Hoo on 13 December and at Kidney Wood on 4 April when 106 were counted. Elsewhere widely recorded in the winter periods at many localities but only in small numbers. Breeding status appeared to be normal, from the limited data received.

Bullfinch *Pyrrhula pyrrhula* Both Old Warden and The Lodge, Sandy reported a stable breeding population.

Crossbill *Loxia curvirostra* Recorded at the following: Maulden Woods, two on 11 January and one on 2 February; The Lodge, Sandy, maximum of six 17-22 April, then one rest of month, one



Snow Bunting, Blows Downs, January 1987.

(Photo: Paul Trodd)

on 23 May, two in June, three on 15 October, one in November and two in December; Heath and Reach, two on 27 July; Whipsnade Zoo, three on 23 April.

Hawfinch *Coccothraustes coccothraustes* Breeding season records came from: Maulden Woods; Kidney Wood, Luton, where at least one pair raised young; Warren Wood; Luton Hoo, food carrying noted; Marston Thrift; Deacon Hill; Old Warden; and Studham. A way from the woodlands one was seen on the downs near Whipsnade Zoo on 17 and 26 January and at Blows Downs on 3 April. A single over Kempston on 31 August suggested post breeding dispersal along with another at Harrold CP the previous day.

Snow Bunting *Plectrophenax nivalis* An immature on Blows Downs from 8-12 January was the first county record since 1980 (TOP *et al*).

Yellowhammer *Emberiza citrinella* A flock of 250+ was noted at Butterfield Green, near Luton in February and up to 100 roosted at Reddings Wood, Ampthill. The Old Warden CBC plot recorded its highest level at 25 pairs.

Reed Bunting *E. schoeniclus* A second winter period roost at Houghton Regis CHP contained at least 100 birds. There were several winter records from gardens in Luton, Bedford and at Haynes.

Corn Bunting *Miliaria calandra* Recorded mainly in the south of the county and along the main river valleys, where locally abundant. Outside the breeding season the following flocks were of note: Totternhoe, 250 in January; Tingley Woods (Beds/Herts border) c150 January to March; Bromham, 64 February; Houghton Regis CHP, 42 at roost on 16 October; Coronation Pit, 'numerous' at roost in January.

MISCELLANEOUS RECORDS

Whooper Swan *Cygnus cygnus* Two pinioned birds at Blunham Lake all year plus another feral at South Mills NR and Girtford GP.

Black Swan *C. olor* One at Radwell GP on 3 June moved to Stewartby Lake on 20th where it was seen intermittently until at least 29 November.

Pink-footed Goose *Anser brachyrhynchus* An injured bird at Whipsnade Zoo on 13-16 April was of undecided origin.

White-fronted Goose *A. albifrons* One at Harrold CP on 21 June.

Bar-headed Goose *A. indicus* One in the Radwell GP area all year.

Cackling Goose *Branta canadensis minima* A single at Whipsnade Zoo in April.

Barnacle Goose *B. leucopsis* This record is not included in the main list as the likelihood of escape from captivity is high; although there is always a possibility one or two could be stragglers from the wintering population in the low countries. Up to six were scattered around the Bedford Clay Pits, mainly at Brogborough and Stewartby Lakes, all year long with a maximum of three at Harrold CP/Radwell GP. Two or three were at Grovebury Farm Pit from 31 August to 27 September, one at Blunham Lake on 16 October, three at Woburn Lake all year and one or two at Luton Hoo.

Cape Teal *Anas capensis* One at Stewartby Lake and Rookery Pit from 22 April to at least 20 June.

Chukar *Alectoris chukar* Present in the Old Warden Tunnel are all year where it probably outnumbers Red-legged Partridge and hybridises with them. Noted at Willington and Cople too.

Budgerigar *Melopsittacus undulatus* One at Bromham on 20 August and at Bramingham Wood, Luton in May.

RECORDS BEING PROCESSED BY BBRC

Black-winged Stilt *Himantopus himantopus* One at Chimney Corner CLP on 20 April.

Ring-billed Gull *Larus delawarensis* A first winter at Elstow Tip on 6 January.

ADDITIONS TO 1986 REPORT

Black-throated Diver *Gavia arctica* One at Harrold CP on 30 November (DJO).

Velvet Scoter *Melanitta fusca* Two at Stewartby Lake on 9 January (PA).

Subalpine Warbler *Sylvia cantillans* The male at Bison Hill on 7 May has now been accepted by the BBRC (WJD). This is the first Bedfordshire record.

CORRECTION TO 1983 REPORT

Collared Pratincole *Glareola pratincola* One at Girtford GP stayed from 19-24 May was also seen on 25th.

SELECTED FIRST AND LAST DATES

Summer Migrants

Species	Arrival	Departure
Hobby	South Mills NR 17 April	Whipsnade Zoo 22 October
Little Ringed Plover	South Mills NR 11 March	South Mills NR 11 August
Greenshank	Stewartby Lake 16 April	Dunstable SW 14 October
Common Sandpiper	South Mills NR 18 April	Radwell GP 28 December
Little Gull	Priory Park 14 April	East Hyde 18 October
Arctic Tern	Priory Park 19 April	Priory Park 16 October
Common Tern	Priory Park 10 April	Priory Park 23 October
Black Tern	Brogborough Lake 18 April	Priory Park 30 September
Turtle Dove	Stewartby Lake 17 April	Stewartby Lake 13 September
Cuckoo	Priory Park 16 April	Priory Park 31 July
Swift	Priory Park 28 April	Woburn 6 September
Sand Martin	South Mills NR 28 March	Dunstable SW 7 October
Swallow	Felmersham NR 28 March	Blunham 18 November
House Martin	Blunham 28 March	Bedford 21 November
Tree Pipit	The Lodge 13 April	Luton 13 October
Yellow Wagtail	Stewartby Lake 5 April	Dunstable SW 11 October
Nightingale	Tebworth 7 April	Marston Thrift 2 August
Redstart	Blows Downs 17 April	Whipsnade Zoo 23 September
Whinchat	Blows Downs 19 April	Shillington 25 October
Wheatear	Blows Downs 22 March	Flitwick 1 November
Ring Ouzel	Blows Downs 28 March	Whipsnade Zoo 23 September
Grasshopper Warbler	Aspley Heath 16 April	Bedford 10 July
Sedge Warbler	Priory Park 10 April	Priory Park 23 September
Reed Warbler	Brogborough Lake 14 April	Priory Park 2 October
Lesser Whitethroat	Blunham 16 April	Whipsnade Zoo 16 September
Whitethroat	Brogborough Lake 11 April	South Mills NR 10 October
Garden Warbler	Kidney Wood 18 April	Whipsnade Zoo 8 September
Wood Warbler	Aspley Heath 29 April	Battlesden Lake 8 August
Willow Warbler	Houghton Regis CHP 31 March	South Mills NR 10 October
Spotted Flycatcher	Blows Downs 5 May	Whipsnade Zoo 25 September
Pied Flycatcher	Kidney Wood 17 April	Stewartby Lake 18 September

Winter Migrants

Species	Departure	Arrival
Bewicks Swan	Radwell GP 20 March	Kempston 4 November
Wigeon	Radwell GP 13 April	Radwell GP 13 September
Goldeneye	Brogborough Lake 17 April	Brogborough Lake 18 October
Goosander	Radwell GP 14 April	Priory Park 13 November
Golden Plover	South Mills NR 25 April	South Mills NR 22 August
Jack Snipe	Houghton Regis CHP 20 April	South Mills NR 11 October
Fieldfare	Blows Downs 9 May	South Mills NR 30 September
Redwing	Blows Downs 30 April	Priory Park 29 September
Brambling	Kidney Wood 24 April	Dunstable SW 11 October
Siskin	Rowney Warren 26 April	Whipsnade Zoo 14 September

PAUL TRODD

BIRDS NEW TO BEDFORDSHIRE (1987)

Green-winged Teal *Anas crecca carolinensis*

Radwell GP, 12th April 1987 — Martin J. Palmer

Immediately south of this flooded gravel pit complex, adjacent to the west bank of the River Great Ouse, east of the village of Radwell, is a large meadow. Whenever heavy rain occurs over a few days, as happened recently, this meadow becomes waterlogged and partially flooded. In these conditions it is frequented by dabbling duck, Snipe and Lapwings.

I arrived today at 4.25pm and from the verge of the A6 immediately adjacent to the river, opposite the meadow, I scanned the waterlogged areas through my telescope.

Forty or more duck were present, comprising 28 Teal, 8 Shoveler, 3 Wigeon and a few Mallard. I noticed one drake Teal had a white vertical flash at the front of the flanks. This bird also lacked a horizontal white scapular line and I immediately realised it was a Green-winged Teal. Close scrutiny during the next fifteen minutes at about 250 metres range confirmed the identity.

It was the same size as the other Teal, with a small grey bill, steep forehead, generally brown head with a greenish flash from the eye back to the base of the shaggy nape, but, unlike the Teal, the creamy outline to this green flash was far less obvious, occurring narrowly about the eye area only and lacking the 'bridle' of its European cousins. The back, mantle and flanks were greyish; the breast speckled brown or pale buff; the rear end was black with a large bright creamy yellow patch either side of the stern. A narrow blackish line only was evident along the scapulars, lacking the white line above it of the common Teal; but this bird had a very obvious white flash at the front of the grey flanks which is absent on the other Teal.

On spreading the news, Duncan Woodhead and Andy Tomczynski were both able to get to Radwell in the early evening and relocated the rarity now on the northwesternmost pit, approximately half a mile from the meadow, and confirmed my identification. Unfortunately, despite extensive searching, the Green-winged Teal was not seen the next day, most of the Teal having moved on as the flood waters had receded. This record has been accepted by the British Birds Rarities Committee and constitutes the first record of this American race to reach Bedfordshire and around the 250th ever in Britain. It was the fourth present in Britain this weekend with others at Woolsten Eyes, Leighton Moss and Gardbridge, Eden Estuary, Scotland.

Address: 48 Gilbert Close, Kempston, Bedford MK42 8RN

Blue-winged Teal *Anas discors*

Dunstable SW, 11th October 1987 — Paul Trodd

Following two days of near continuous heavy rain and strong westerly winds, the morning of 11 October 1987 dawned refreshingly bright and warm with light airs. Whilst checking the settling lagoons at Dunstable SW I encountered an old looking *Anas* type dabbling duck on No. 3 lagoon, in company with Mallard, Teal, Shoveler, Gadwall and Pochard. I stalked along the bank as close as possible (c50 yds.) and settled down to take field notes in perfect viewing conditions.

My immediate impression was of a Garganey but without the 'striped' head markings; and in comparison with nearby Teal it seemed 'longer' with an overall greyish-brown colouration. A more critical analysis through a x25 telescope revealed the following:

Head: Crown, dark greyish-brown. Eye-stripe same colour, extending from top of bill to rear of ear-coverts. Paler superciliary stripe and whitish loreal patch at base of bill. Chin, off white. Cheeks, finely streaked pale greyish-brown down neck where contrast with darker spotted breast.

Body: Back and wing feathers darker than underparts with creamy-buff edges. Flanks, marked with dark crescents blending into spotted under-tail coverts. It flapped its

wings several times revealing a pale blue forewing, white line and green speculum.
Underwing pale grey.

Bare Parts: Bill, dark grey, broad and head length. Eye, dark with conspicuous pale orbital ring. Legs not seen.

After 30 minutes (0900-0930) close scrutiny I was confident that I had discovered a female/immature Blue-winged Teal, a species native to the Americas, and new to Bedfordshire. Feeling quite elated I rushed home to phone the news around only to hear that most of the county's birdwatchers were out. Eventually Stuart Winter saw it at dusk, after I had returned from another viewing at 1100 hours.

Despite subsequent daily checks of the site it was not relocated. This record has been accepted by the British Birds Rarities Committee.

Address: White Garth, West Parade, Dunstable, Beds LU6 1EN

Arctic Skua *Stercorarius parasiticus*

Willington GP, 23rd August 1987 — Dave Ball

Shortly before 900 on Sunday, August 23rd 1987, I was returning to my car which was parked at the Willington Dove-cote entrance to Willington gravel-pits. I had almost completed a circuit of the eastern pit of the complex, which was then worked out and being filled by spoil tipping. A number of small pools suitable for waders had formed on the floor of the pit, and on the day in question I had earlier seen a Greenshank and a Green Sandpiper. I knew that these birds had flown onto pools nearest the Willington Dove-cote entrance to the pit, and as I had to walk right past them, I would probably flush them.

This occurred as expected, and I followed the birds with 10 x 50 binoculars to check that they dropped back into the pit. As I tracked the waders, I noticed a small, loose flock of gull-like birds approaching from the NE, behind the waders and considerably further off. I was immediately alerted, as weather conditions were suitable for overland seabird movements, with a northerly wind and low cloud and mist on the Norfolk coast, and I knew that Dave Kramer had seen a large flock of Sandwich Terns at Priory Park the previous day. As the approaching birds were too distant for identification, but coming almost directly toward me, I continued to follow the waders for 15 or 20 seconds, until they dropped into the north corner of the pit.

When my attention returned to the flock, they were already much closer — perhaps 800 to 1000m distant, flying very fast in straight, level flight, and bearing away to my left. Even at that distance, the character of the build and flight, with a compact, powerful body and broad-based wings with long, raking, sharply pointed primaries, was obviously that of a small skua. I watched the birds approach and fly past to the south of me, at closest perhaps 200 to 300m distant and 50 to 100m high. Almost immediately after closest approach, the flock disappeared behind the poplar trees of Willington Woods fringing the pit. The flying speed was so fast that the whole period that the birds were under observation was probably not much more than a minute.

At closest approach the birds were silhouetted against an extensive area of overcast sky with some brighter patches, and the resulting light conditions were such that they appeared as sharply defined dark silhouettes with pale areas near the edges of the silhouette "burned out", but by staring at individual birds for a few seconds it was possible to register that at least two or three had the pale bellies characteristic of adult light-phase skuas, and that at least one or two others were uniformly dark, suggesting dark-phase adults. At closest approach the flock was quite widely spread — well over a binocular field — and it was not possible in the time available to look closely at every individual. There were eight individuals, of which several, at least, were adults. Probably all were adults.

The flight silhouette was that of an Arctic Skua in fast level flight, with the wings raking back at the carpal joint and the tail held closed. The flight was more like the purposeful closing flight shown by skuas flying low over water towards a tern carrying food than the gentler gull-like flight sometimes shown by individuals loitering or slowly moving past a seawatch point, and therefore

totally unlike the wavering flight normally used by travelling gull flocks. At closest approach the silhouettes were undoubtedly sharp enough for the "spoons" of adult Pomarine Skuas to be readily apparent, and probably for the long tail streamers of adult Long-tailed Skuas to be visible; in any event dark-phase adult Long-tailed Skuas are practically unknown, Long-tailed Skuas have in my (admittedly limited) experience a much lighter, less powerful flight, and a flock of eight Long-tailed Skuas inland would be totally unprecedented. It is certain therefore that the birds were Arctic Skuas.

After this remarkable experience, I noted the time as 1902, and returned quickly to my car. I realised I had no money on me to make a phone call, and therefore drove to Dave Odell's house in Kempston. Though my route must have crossed that of the skuas I did not see them again — looking up into the sky through the steering wheel at speed is not a very safe occupation. On reaching Dave's house I found him talking to Andy Tomszinski on the phone, so asking Andy to put the news out we carried on to Stewartby, arriving about 1920. Though subsequent checking on the OS map suggested that the heading of the flock would indeed have taken them within a kilometre or two of Stewartby, unfortunately they had not paused there as we hoped they might, nor were they at Chimney Corner or at Barkers Lane which we checked subsequently. Given the purposeful nature of their flight, they probably did not intend to stop anywhere, though the limited amount of remaining daylight suggests that they probably had to roost inland. They could easily have changed course immediately after I saw them to follow the Ouse, or simply have continued, as they would have probably passed Stewartby before we arrived.

I suspect that occurrences such as this may be more frequent than is realised, and may be on the increase. "Sky-watching" for passing flocks of seabirds, waders or wildfowl, or individual raptors or large heron-like birds could prove a profitable occupation in the right conditions — in the last six years I've now looked up by chance and seen a Bittern, a Red Kite and a flock of Arctic Skuas flying by!

Address: 254 Goldington Road, Bedford MK40 3EB

Bluethroat *Luscinia svecica*

Luton, 28th May 1987 — M.P. and P.B. Hickey

At 0710 hours on 28th May 1987, in my back garden at Mountfield Road, Luton, I noticed a small Robin-like bird land near our pond 20 feet away. It drew my attention because it was so unusual and completely different from anything I had ever seen before.

My first impression was of a small brown bird with a bluish front and longish thin tail, which it frequently wagged, (it was the blue front which caught my eye). The next details I noticed were when it came nearer the house — still at the side of the pond, only 10 feet away. It had a white stripe across the top of the eye, on either side of the head, longish thin legs and a small pointed beak. I was so fascinated by the front of the bird that I did not notice any more tail details. However, the front of the bird was a slate-blue with a dark line underneath. Overall it appeared thinner than a Robin but gave the same 'chirpy' look.

After consulting the Hamlyn Guide to Birds of Britain and Europe I concluded that the bird I had watched for several minutes in good clear light was a Bluethroat.

Address: 30 Mountfield Road, Luton LU2 7JN

Sabine's Gull *Larus sabini*

Stewartby Lake, 17th October 1987 — Barry Nightingale

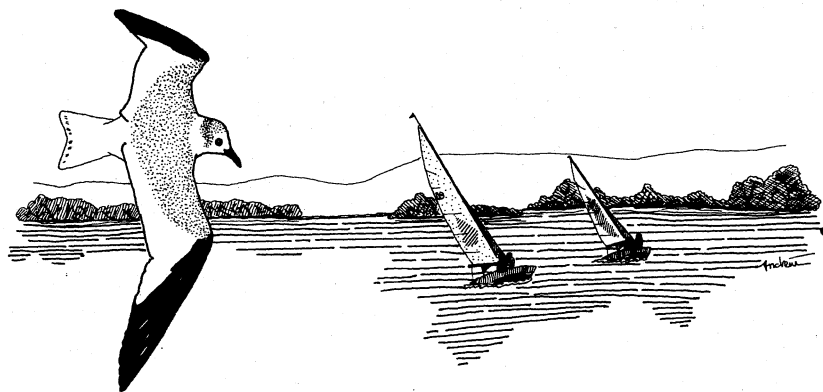
Following the storm which travelled across southeast England on the night of 15th/16th October, and reports of Great Skuas (*Stercorarius skua*) at Brogborough Lake on the 16th I visited Stewartby Lake the next day to see what other birds might have been blown in.

Shortly after arriving I noticed a single long-winged, medium-sized gull approaching high from the southeast some 400 metres away. By good fortune it circled to reveal a striking black, white and grey upper pattern. My immediate thought was "Kittiwake" then incredulously I realised that I was looking at a Sabine's Gull (*Larus sabini*). The three colours on the upperwing and mantle were clean cut and lacked the black "W" pattern so obvious on a juvenile Kittiwake.

The primary forewing was black with the mantle and coverts grey. A white triangle covered the secondaries and greater coverts, separating the black and grey areas. The head appeared white as did the rump and tail. Seen briefly on the water the most obvious feature not noticed in flight was the bill, strikingly yellow with a black base. The nape and collar appeared to be dark grey.

The bird took flight and departed to the northwest, later I was to discover that probably up to 200 Sabine's Gulls had been involved in an unprecedented inland wreck, together with Great Skuas and Grey Phalaropes (*Phalaropus fulicarius*), one of which stayed at Blunham Lake from 17th to 22nd October.

Address: 7 Bloomsbury Close, Woburn, Beds MK17 9QS



Sabine's Gull

(Andy Chick)

SPOONBILLS IN BEDFORDSHIRE

by Paul Trodd

During a recent literature search of the monthly journal *British Birds* Vols. 1-40 (1907-47) a note in Vol. 20 (1926-27) p. 202 was of particular historical importance. Although the Spoonbill was mentioned by H. A. S. Key in his paper on the status of Birds in Bedfordshire, *Bedf. Nat.* 1 (1947) p. 43, the record was doubted by many due to a lack of documented evidence; also this species has not subsequently occurred in Bedfordshire. The following note quoted from *British Birds* eliminates any past doubts and firmly places the Spoonbill on the county list.

Spoonbill in Bedfordshire. *British Birds* (1927-27) 20, 202

Three Spoonbills visited the Ouse Meadows at Renhold in 1916 when one of the trio was unfortunately shot on March 24 by a local farmer, through whom I obtained confirmation of their occurrence. This bird was subsequently purchased, in the flesh, for 75 shillings by the local taxidermist Mr A. S. Covington, who also advised me of this specimen being in his possession. For obvious reasons of the law I was requested by him to suppress the recording of the same at the time, but now, owing to his death in 1925, I feel I am at liberty to publish this, the first known instance of this species visiting the county.

J.S. ELLIOTT

How fitting it is that it should be Janion Steele-Elliott (1871-1942), who contributed so much to Bedfordshire ornithology, who recorded this event for posterity.

I would like to thank Dr J. T. R. Sharrock for allowing access to his set of *British Birds* and to thank R. Dazley, for his assistance with the literature search.

Address: White Garth, West Parade, Dunstable, Beds LU6 1EN

BIRD RINGING REPORT

Report of the Co-ordinator

Once again the year turned out to be a quiet one with only 991 birds ringed. There are only three active ringers in the county at present, and none of us were particularly active in 1987. Goose ringing continued at Harrold Country Park and was the most successful year yet. A full account will be published of the results over the past 5 years in next year's journal. Four goose recoveries are listed, two showing movements within the county, and our longest movement to date, a Canada Goose shot in Dorchester, Oxfordshire, 73Km from place of ringing. There was a good selection of Pochard recoveries to various European countries from Blunham.

Without doubt pride of place in the recoveries goes to the Meadow Pipit ringed at East Hyde in January 1985 and found freshly dead in October 1986 in Iceland, only the third British recovery of that species in Iceland. The other highlight was the Redshank ringed at Cliffe Marshes in Kent and controlled at South Mills NR. Most of the inland breeding Redshank winter on or around the British coast, and a large number winter along the Thames Estuary.

It is unfortunate that the county is not blessed with many ringers, a greater quantity of birds ringed would lead to more recoveries and hence a more interesting report. My thanks go to Errol Newman and Peter Wilkinson for their prompt submission of records and let us hope for a better year in 1988.

RINGING TOTALS FOR 1987

Greylag Goose	56	House Martin	59	Spotted Flycatcher	9
Canada Goose	77	Meadow Pipit	15	Long Tailed Tit	14
Teal	1	Yellow Wagtail	1	Willow Tit	3
Tufted Duck	1	Pied Wagtail	9	Coal Tit	2
Moorhen	4	Wren	10	Blue Tit	65
Little Ringed Plover	3	Dunnock	29	Great Tit	26
Ringed Plover	11	Robin	19	Nuthatch	1
Lapwing	1	Blackbird	43	Treecreeper	1
Snipe	3	Song Thrush	18	Starling	4
Redshank	3	Redwing	1	Chaffinch	5
Common Tern	7	Sedge Warbler	58	Greenfinch	16
Cuckoo	2	Reed Warbler	50	Goldfinch	27
Tawny Owl	2	Lesser Whitethroat	13	Redpoll	2
Swift	14	Whitethroat	22	Bullfinch	40
Kingfisher	3	Garden Warbler	29	Yellowhammer	3
Green Woodpecker	1	Blackcap	33	Reed Bunting	43
Skylark	1	Chiffchaff	4		
Sand Martin	2	Willow Warbler	60		
Swallow	63	Goldcrest	2	TOTAL	991

SELECTED LIST OF RECOVERIES

species	ring number	age code	sex	ringing and recovery dates	ringing and recovery location	recovery manner	distance (km) and direction
Greylag Goose	L04346	4	♂	28.6.86 8.10.87	Harrold GP Thrapston, Northants	X	22—
Canada Goose	L03576	3	♂	7.7.84 12.9.87	Harrold GP Kempston Hardwick, Beds	1	11—
	L04307	1		28.6.86 5.11.87	Harrold GP Potton Manor Lakes, Beds	V	25—
	L03550	1		7.7.84 29.9.87	Harrold GP Dorchester, Oxfordshire	1	73—
Pochard	GJ13702	4	♂	20.2.81 27.1.86	Blunham Thielle, Switzerland	1	777—SE
	GJ13780	2	♂	7.12.81 27.5.86	Blunham Kena, Vilnius, Lithuanian SSR	X	1746—E
	GJ18623	4	♂	10.2.82 31.5.86	Blunham Varkholmsviken, Finland	X	1536—NE
	GJ18685	2	♂	20.11.82 1.9.86	Blunham Hallarumsvikan, Sweden	?	1141—ENE
	GJ87781	6	♂	7.1.85 24.11.85	Blunham Valle Dragajesolo, Italy	1	1196—SE
Ringed Plover	NV23702	1	♀	22.5.85 10.7.87	St. Albans, Herts South Mills NR	V(B)	51—N
	BV20672	3	J	22.7.84 17.7.86	South Mills NR Earls Barton GP, Northants	V	30—NNW
Redshank	CE98287	4	♀	19.9.82 21.4.87	Cliffe, Kent South Mills NR	V	93—NNW
Meadow Pipit	C385067	6		19.1.85 17.10.86	East Hyde Breidabolstadir, Iceland	X	1866—NW
Greenfinch	NN92855	5	♀	20.4.84 21.1.87 27.1.87	Girtford GP Aldershot, Hants Aldershot, Hants	V V	104—SSW 104—SSW

Euring age code:

- 1 Pullus: nestling or chick
- 2 Fully grown, but year of hatching unknown
- 3 Hatched during calendar year of ringing (J—juvenile plumage)
- 4 Hatched before calendar year, but exact year unknown
- 5 Hatched during previous calendar year
- 6 Hatched before previous calendar year but exact year unknown

Sex:

- ♂ male
♀ female

Recovery manner:

- B—known to be breeding at recovery location
V—controlled (trapped and released)
1—shot or killed
X—found dead or dying

D.S. WOODHEAD

STUDY OF MANDARIN (*AIX GALERICULATA*) IN BEDFORDSHIRE

by P. Fuller

MANDARIN HISTORY

Mandarin are a native species of Eastern Asia, found on lakes and rivers in areas of well-established forests, particularly in China and parts of Japan.

First imported into Britain in about 1745, the first captive breeding of Mandarin in this country took place at London Zoo in 1834. The first record of an escaped bird was of an unfortunate individual shot in Berkshire in May 1866. At the turn of the century birds were released at several places around the country and have been breeding ferally since the 1930's. Mandarin were finally admitted to the British and Irish species list in 1971.

HABITAT AND STATUS IN BEDFORDSHIRE

In Britain the preferred habitat of Mandarin is areas of lakes and ponds, surrounded by mature open deciduous woodland and parkland, particularly if the trees overhang the waterside, giving secure roosting sites, with old trees nearby to allow cavities and holes to be used as nest sites.

In Bedfordshire, Woburn Park provides the birds with all these requirements and has been the stronghold of the local population. Mandarin were first introduced to the park during the early 1900's by the 11th Duke of Bedford. Prior to the First World War approximately 300 individuals were present at Woburn, but the population declined by approximately 50% during the war, with a similar loss of numbers occurring during the Second World War, largely due to a lack of artificial feeding.

From that period little data are available until the Bedfordshire Bird Atlas Study 1968-1977. Breeding Mandarin were confirmed in four tetrads, with possible breeding in another (the county consisting of 371 tetrads) with the total population considered to be very small. The population was then still centred around Woburn, although small pockets were recorded elsewhere. In 1973-76 breeding was reported in the Linslade area, and also on the river Ivel at Blunham 1975-77.

More recently a pair were reported as possibly breeding at Wrest Park in 1986, with breeding confirmed at Luton Hoo, in the south of the county, in 1986 and 1987.

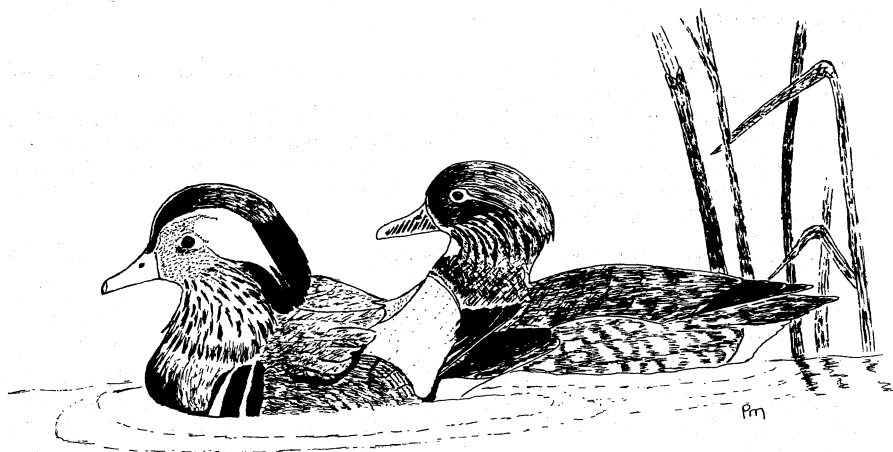
The current population breeding within the county is an estimated 10 to 15 pairs, with the majority still in the Woburn area. This population, although small, appears stable; the controlling factor preventing expansion into areas away from Woburn probably being lack of suitable habitat. The birds are also largely sedentary, and are thus unlikely to move away to outlying areas, even if available. The number of pairs breeding at Woburn Park itself will probably never increase much above current levels, as the park supports a thriving colony of Jackdaws (*Corvus monedula*), which compete with Mandarin for tree hole nest sites. However, strategically positioned nest boxes could significantly increase breeding success.

IDENTIFICATION AND PLUMAGE

Identification of Mandarin should cause few problems, it being unlike any other European duck, and the male in particular is well known to many due to its exotic multi-coloured plumage with bright head plumes and orange wing-sails. Typically of ducks the female is rather drab, with largely grey-brown plumage, a greyish head having a thin white eye ring and stripe from behind the eye, and a whitish area around the base of the bill. The upper parts are grey-brown with paler flanks covered with pale oval spots.

Males in eclipse (June-July) are very similar to the females but tend to have greyer heads with less or no white around the base of the bill, and have less distinctive flank markings. The most positive

Address: 51 Lowick Court, Moulton Leys, Northampton



Mandarin

(Peter Marshall)

method of sexing males in eclipse is the reddish-pink colour that remains on the bill. *Birds of the Western Palearctic* states that: "females can have pinkish tinged bills", but the author has never found this to be the case with birds observed at Woburn and Eversholt, the females noted as only having dark brownish bills. Males start to show signs of their nuptial plumage from about mid- to late-August.

Chicks, soon after hatching, are generally yellow and brown in colour, with particularly yellow heads. By the time they are about half grown young birds resemble the female but are a warmer brown above, and much sandier below, with little white around the eye and have a darkish bar running cross the cheek. Four to five weeks after hatching they are similar in size to the adult female but are still a warm brown colour, with duller flanks, mottled rather than oval spotted. The white area on the chin is usually less extensive than on the female, and the eye stripe is very indistinct and may be absent in some individuals. The bill colour of the young birds, like the female, is brown.

After about two and a half months the immature birds are virtually inseparable from adult females without close scrutiny, although the leg colour of the younger birds is dark, as opposed to the yellowy to pale grey-brown of adults.

SIMILAR SPECIES

It is unlikely that Mandarin would be mis-identified as any other wild duck in Europe, although it can be confused with the ecologically similar Wood Duck (*Aix sponsa*) of North America. Male Wood Duck have dark green-purplish glossed heads and lack the sails and whiskers of the male Mandarin. Female Wood Duck are darker than female Mandarin, with slight glossed upper parts and more extensive white showing around the eyes and bill. The bill, observed closely is also structurally different.

These two species represent the total sub-group of *Aix* ducks in the world, and although frequently kept in captivity (and thus escape) Wood Duck have been unable to establish a successful hold in the wild. Fortunately, as far as the author is aware, no hybrid of Mandarin x Wood Duck exists, despite their close relationship; however, a pair of both species introduced into Wardown Park, Luton, during the mid-1970's, freely intermingled.

GENERAL HABITS

Mandarin are usually found in small parties outside the breeding season, although occasionally large flocks can occur. They are generally wary birds, although they can be fairly approachable in areas of frequent human presence.

During the day they are largely inactive, roosting on branches of trees overhanging the water's edge, or away from water in thick vegetation, rhododendron bushes being particularly favoured. The birds become more active at dusk, and are in fact largely nocturnal.

Pair bonds are usually established in December; small groups of males displaying to females with a variety of head flicking and bobbing rituals, with some birds, perhaps first year and unpaired individuals, still displaying into January. By the beginning of March most pairs disperse to breeding sites, the nest, a hole in a tree, selected by the female, with 9-12 eggs laid at the end of April or beginning of May.

The young hatch during June or July and are tended by the female only, the males usually having left the breeding area to moult. Towards the end of August/beginning of September the young disperse with the females, and rejoin males at wintering sites, forming small family groups and flocks. The males by this time have begun to regain their nuptial plumage, which is usually complete by mid-October in readiness for forthcoming displays.

MANDARIN AT EVERSOLT LAKE

The following account is from the author's own studies of Mandarin taken at Eversholt, and to a lesser extent Woburn Park, 1980-1982.

Eversholt Lake is a small lake situated just outside Woburn Park. It is bordered by trees and has a small central island with mature trees of several species, many of which have overhanging branches. Adjacent to the lake are arable fields, small areas of pasture and a small orchard. Eversholt thus provides ideal Mandarin habitat with the central island being a favoured roosting area, and to human eyes at least, the island appears to be a perfect nesting location.

Throughout the study period, however, Mandarin were not observed to nest on the island, apparently preferring the nearby orchard area. Females were frequently observed towards dusk to fly out of the orchard, during the nesting season, to the lake to feed and bathe, returning to the trees approximately an hour after dark. The birds are surprisingly agile fliers through trees and, despite several attempts, tracing a bird back to the nest proved unsuccessful.

Similarly, the female leading her young to the lake after hatching was never observed, with the young first observed on the water at an estimate 2-3 days after hatching. The young were always solely tended by the female, with no males ever noted on the lake during June and July. (Further investigation discovered small groups of males on nearby Woburn Park Lake, in eclipse plumage, and presumably flightless.)

The food of the young, until about half grown, appeared to be entirely of insects snatched from the water's surface; the chicks, when very small, almost leaping from the water to achieve this. Once about half grown they ventured out onto the banks of the lake at dusk and appeared to graze, although actual food taken could not be positively identified. When the young reached this age the females became less attentive towards them, often swimming off a fair distance, albeit only for short periods. The adult female at this time undergoes a moult and is presumed flightless; a frequent occurrence noted was a nervous head jerking action when an adult female swam across areas of open water — the head movement being reminiscent of the head bobbing of a Moorhen (*Gallinula chloropus*).

By about September the young frequently flew away from the lake at dusk, towards Woburn Park, occasionally returning soon after dark and sometimes accompanied by two or three other individuals. At about the same time male birds began to visit the lake, usually just before dusk.

Although small mixed groups of males, females and immatures were frequently present at Eversholt in late autumn courtship displays were never observed. The author has only ever observed such displays on areas of open water at Virginia Water, Berkshire and it may be that the size of the lake at Eversholt is too small for such purposes. It is presumed that the birds paired off on the larger lakes of Woburn Park.

During winter few Mandarin were observed at Eversholt, Woburn appearing to be preferred as a wintering site, although fewer visits were made to Eversholt during winter, throughout the study period.

BREEDING SUCCESS OF BEDFORDSHIRE MANDARIN

Unfortunately little data are available on the breeding success of the species within the county, however, the following summary is given based on the author's notes and from the Society's record cards.

Clutch Size: Nest with 10 eggs Linslade 1973, with 5 ducklings later reported. From the same area, nest with 10 eggs recorded 1975, nest with 11 eggs 1976, with success reported as doubtful and unknown respectively. (BWP quotes typical clutch size 9—12 eggs.)

Hatching Success: Appears to be good, with broods of up to 10 very young ducklings frequently recorded.

Fledging Success: Poor, based on detailed study at Eversholt, 1981.

Brood 1—8 chicks, hatched early June, all successfully fledged mid-July.

Brood 2—10 chicks, hatched early July, 9 surviving until about half grown, 5 successfully fledged.

Brood 3—10 chicks hatched late July, absent following day.

Brood 4—10 chicks hatched as above, brood down to 4 after a few days, after which remainder of young lost.

(NOTE: Each brood above represents the progeny of four different females. Throughout the period eight other immatures also visited Eversholt, but were presumed to have been reared elsewhere.)

From the above it appears that young hatched by the end of June, to beginning of July, seem to have the best chance of survival, those hatched after that date observed to fare less well. Perhaps later broods are hatched by younger and less experienced females, however, the data presented represent only one breeding season, 1981.

In 1982 only one female with young was noted at Eversholt, although during this year the lake suffered from increase disturbance levels, as the result of anglers fishing from a boat.

Data since 1982 are again unfortunately limited and it is suggested that further study into the distribution and success of breeding Mandarin in Bedfordshire would prove to be both interesting and rewarding

ACKNOWLEDGEMENTS

I would like to thank P. Trodd for reading and commenting on the text of this article and P. Marshall for the accompanying artwork.

REFERENCES

- DELACOUR, J. (1954-9) *Waterfowl of the World*, London.
GRUSON, E.S. (1976) *Checklist of the Birds of the World*, Collins.
HARDING, B.D. (1979) *Bedfordshire Bird Atlas*, Bedfordshire Natural History Society.
LEVER, C. (1977) *Naturalized Animals of Britain*, Hutchinson.
SHARROCK, J.T.R. (1976) *Atlas of Breeding Birds in Britain and Ireland*, Poyser.
CRAMP, S. (1977) *Birds of the Western Palearctic*, Oxford.

REPTILES AND AMPHIBIANS

Report of the Recorder

1987 was a busy year in spite of the wet weather and this report is comprised of notes on a few of the most interesting events.

In March a working party was organised by David Anderson to do some pond clearance work on one of Bedford's main Midwife Toad breeding sites. Our efforts did not seem to upset the toads as on subsequent visits to the site, considerable vocal activity was noted.

The migration of Common Toads occurred during the second week in April, peaking on the 13th April (as noted at Cople Pits Nature Reserve). Volunteers again manned the points where the toads cross roads at several of the county's breeding sites.

Grass Snakes were seen throughout the year including one seen on a BNHS field meeting in April at the Harrold — Odell Country Park when Mary Sheridan almost trod on one as it basked on the path. A few Grass Snakes were found dead on the road, e.g. one by Felmersham bridge and another on the Felmersham to Carlton road.

There was one record of an alien species. It was found at Stotfold in September and was identified as *Bombina bombina*, the Fire-bellied Toad. These are available from some pet shops and presumably had either escaped or had been deliberately liberated, which is illegal. This individual was to be kept at Stotfold school.

On September 26th the Second Herpetofauna Recorder's Seminar was held. This time the venue was Leicester Polytechnic and I gave a short talk on Recording Reptiles in Bedfordshire. It was good to see a few familiar Bedfordian faces in the assembly of about one hundred people. If a third such seminar is planned, notice will be given of it in *The Muntjac*.

The Beds and Hunts Wildlife Trust invited me to lead the first of their Discovery Workshops entitled "Discovering Reptiles and Amphibians". This was held in April at Priory Country Park and so plenty of tadpoles were found and also numerous young toads, some of which had attractive brick red patterning.

The questionnaires for the Bedfordshire Garden Pond Survey continued to be returned at a pleasing rate, sometimes five or six arriving in one postal delivery. Other records of amphibians and also reptiles continued to be collected and were received from Society members too.

HELEN M. MUIR-HOWIE

SLUGS AND SNAILS

Report of the Recorder

Once again I can report a new Vice-county record for Bedfordshire. *Arion lusitanicus* Mabile, 1868 was discovered in Bramingham Wood nr. Luton. This species is similar to some colour varieties of the large black slug, *Arion ater* (Linnaeus, 1758) and has only recently been segregated as a separate species for Britain.

Mr D. W. Guntrip has been paying detailed attention to the 10Km square SP 94 as the coverage of this area was poor. He has discovered a second site for *Vertigo pusilla* O.F. Muller, 1774, based on a dead shell. Live specimens have yet to be found.

Limestone walls at Turvey support several good colonies of *Pyramidula rupestris* (Draparnaud, 1801) and these will be checked at frequent intervals.

Following the extensive rainfall during 1987 river systems, ditches and ponds have overflowed. Much effort has been put into gathering as much flood debris as possible which is dried and then stored, with labels, for future identification. A small sample sent to me by Mr G. Dennis from Priory Park, Bedford yielded 32 species.

Due to work by the Anglian Water Authority at Turvey the flow and depth of the river have been altered and there is now a fairly extensive 'beach' area. Fluctuating flooding over this beach area brings in new strand lines of flood debris and these have proved very interesting. Some of the mussel

shells collected are the ancestors of our present day species and work on these fossils is under way. Among exotic finds in the county is an unusual one from the Sainsbury store in the Luton Arndale Centre. Mr E.H. Jones discovered a live specimen of a *Pleurodontid* snail among bananas. The animal is still alive but will eventually be sent to an expert for identification, when it dies. Another exotic species, *Zonitoides arboreus* (Say, 1816), commonly found in hothouses, was found in the Tamarind House at Whipsnade Zoo by Mr D.W. Guntrip.

I would like to thank all members who have given me specimens or bags of flood debris. Please continue to help by sending me any slugs or snails that you find. Garden species could quite easily be collected by every member of the Society and posted in an empty plastic container (margarine tubs for example). I will identify all specimens and enter their records into the system (do not forget date and locality).

I would also like to thank Mr D.G. Rands for his patience in photographing molluscs for me. He has built up a very fine collection of slides although he still has a long way to go before all the British molluscs are on film.

E. BERYL RANDS

BUGS (Hemiptera — Heteroptera) Report of the Recorder

For several years, cool damp weather at key periods has depressed bug numbers, notably the *Psallus* species which live on Oak. 1987 was the worst year so far in this respect. Records of particular interest include two additions to the county list. The first was the fir-cone bug *Gastrodes abietum* several of which emerged from Spruce cones collected by Dr Nancy Dawson in Chicksands Wood in December 1986. This is not a common species although widely distributed in Britain. The second new species was encountered in July along the green lane at Dunton, this was *Halticus luteicollis*. Larvae of 4th and 5th instar were fairly frequent in the vegetation amongst Goosegrass. I took some to mature and these became adult a week later. There seemed to be some association with White Bryony in the wild at Dunton although at home the bugs fed avidly on Goosegrass shoots.

On 30th August I visited the disused railway line at Leighton Buzzard to look for *Placochilus seladonicus* (Red Data Book 1) but found none at the usual site. The habitat is still suitable although destruction by commercial development seems imminent. The new Luton-Dunstable road is currently being built through its other Beds site. I did find the second Bedfordshire specimen of the lace-bug *Physatocheila dumetorum*, beaten from Hawthorn.

There was a severe gale in March which brought down some of the Mistletoe in Wrest Park, when I visited the site about four weeks later I found *Authocoris visci* (2 females, 1 male) on still green Mistletoe, the second county record.

Finally, my own first record of *Phytocoris populi* in the county was one on the trunk of a Lombardy Poplar at Fenlake in August.

ADDITIONS TO THE BEDFORDSHIRE LIST

Lygaeidae

Gastrodes abietum Bergroth — several adults in Spruce cones, Chicksands Wood December 1986.

Miridae

Halticus luteicollis (Panzer) — Dunton Green Lane 11 July 1987, 4th — 5th instars frequent on *Galium aparine*. Four 5th instars matured 17 July (2 male, 2 female).

B.S. NAU

DRAGONFLIES (Odonata)

Report of the Recorder

In March 1988 Stephen Cham kindly agreed to take over from me as Dragonfly recorder of the Society. This, then, is my last annual report, and I shall take the opportunity to summarise national progress in dragonfly recording over the past 15 years, and the change in status of our local dragonflies since the war.

I was appointed county recorder in 1972. There were no popular monographs on dragonflies then, and interest in the group was limited. Since then, a number of events have transformed the picture. Distribution maps of dragonflies in the British Isles based on 10 km square recording were published in 1974, 1978, 1979 and 1982. The final atlas, including 1987 results, will be produced later this year. The Odonata Mapping Scheme published its first newsletter in April 1977 and held its first recorders' meeting in April 1979. In 1981 the emphasis moved to site recording with site conservation in mind. The best dragonfly sites were placed on the NCC's Invertebrate Site Register, initiated in 1980. The British Dragonfly Society was founded early in 1983 and publishes newsletters and a twice-yearly journal. Cyril Hammond's *The Dragonflies of Great Britain and Ireland* published in 1977 proved to be a catalyst to the popularity of the group, partly by inventing acceptable English names. Since then at least 4 new monographs on British dragonflies have come out, as well as county guides. The Society's *Dragonflies of Bedfordshire* was one of the earliest, published in 1976.

What of the insects themselves? How have they fared? Fortunately an excellent entomologist, Ray Palmer, published in the 1947 edition of the *Bedfordshire Naturalist* an account of the dragonfly species then known in the county. This was based on his own records, and those of Bernard West, Bernard Verdcourt, D. W. Snow and D. Ashwell, all from the 1940s and on records sent to Cynthia Longfield when she was preparing the second edition of her *Dragonflies of the British Isles* first published in 1937. For records during the years 1948 and 1950 we have Ray Palmer's species cards on which he noted the observations of his four fellow odonatists and of D. A. Reid of Leighton Buzzard, as well as his own. It is interesting to compare Ray Palmer's account with the present position, roughly 40 years later. During this period dragonfly habitats have changed considerably. Most of the farm ponds have gone, and the River Ouse downstream of Bedford has been canalised. On the credit side, however, are the very extensive water-filled mineral workings — gravel, sand, clay and chalk pits, many now our best dragonfly sites. Garden ponds and irrigation pits have also increased in number especially during the last 20 years.

Of the large hawkers dragonflies Ray Palmer describes the Southern Hawker (*Aeshna cyanea*) as the commonest, the Brown Hawker (*Aeshna grandis*) as 'fairly common', the Migrant Hawker (*Aeshna mixta*) as 'by no means common', but 'commoner than *Aeshna juncea*' (the so-called Common Hawker). He records the Emperor Dragonfly (*Anax imperator*) as 'scarce' and the Golden-ringed Dragonfly (*Cordulegaster boltonii*) as a casual, with only two records from the county, one in West Wood, Knotting (July 1947) and one in Putnoe Wood (July 1948). The current position is that *Aeshna cyanea*, *A. grandis*, and *A. mixta* are all now ubiquitous, *Anax* quickly colonises many new pits and large ponds, *Aeshna juncea* has not been recorded in the county since 1948 although it is present in Hunts., and *Cordulegaster* remains a casual — the only recent record being a migratory swarm that arrived at Felmersham Gravel Pits during the hot summer of 1975.

Of the darters, chasers and skimmers, the status of all species has changed since the war except two — the Common Darter (*Sympetrum striolatum*) and the Scarce Chaser (*Libellula fulva*). *Sympetrum striolatum*, in the 1940s was 'very common and widespread being found in all types of localities'; this is still true today. *Libellula fulva* has only ever been recorded once in the county, at Newnham, Bedford in the 19th century. Ray Palmer reported that it was found regularly on the Ouse near Huntingdon between 1909 and 1913. It is still present there today, and has colonised some nearby gravel pits. There is no reason why it should not occur on the Ouse near the county boundary with Hunts.

Broad-bodied Chaser (*Libellula depressa*) is described by Ray Palmer as 'probably the most abundant large dragonfly in the county . . . frequently to be seen round small farm ponds and ditches'. I could not find this species in Bedfordshire in the early 1970s, its decrease perhaps to be linked with the loss of farm ponds. However, it is now quite frequent, rapidly colonising new garden

ponds, even quite tiny ones, and occasionally occurring on the Ouse.

Four-spotted Chaser (*Libellula quadrimaculata*) according to Ray Palmer 'seems to be rare in the county and may possibly be only a casual visitor'. Now it is found in most large ponds and shallow pits where there is some emergent vegetation, and is by no means rare.

Black-tailed Skimmer (*Orthetrum cancellatum*) is the species that has increased most spectacularly since the war. Ray Palmer in his 1947 article has no records for it in the county — the first sightings were by D. A. Reid in 1950 at Grovebury Pits, Leighton Buzzard and Brickworks Pit, Stanbridge. It is now abundant in all newly dug pits and on the Ouse after dredging works as it prefers bare mud. It seems to be moving steadily north from its original stronghold in the south of Great Britain, and by 1984 had reached Derbyshire.

Ruddy Darter (*Sympetrum sanguineum*) is described by Ray Palmer as 'apparently rare but may be overlooked' and he cites two records only. It is now present at several older gravel and chalk pits and some large ponds and has recently colonised the River Ouse at Willington and Felmersham Gravel Pits, both sites that were well studied in the 1960s and 70s without this little darter ever being seen.

Black Darter (*Sympetrum danae*) now appears to be absent from Bedfordshire. Ray Palmer records that two were taken from Bromham Park in 1943 by Bernard West and one from Wavendon Heath in 1951 by himself. It is a species that favours peaty pools and the Wavendon Heath Ponds is a site it may possibly recolonise.

A similar picture emerges with the damselflies. Some species are much as Ray Palmer found them, some have benefitted from the new wet habitats while others have declined or been lost from the county. First, three species whose status is unchanged; the Blue-tailed Damselfly (*Ischnura elegans*) is described by Ray Palmer as 'common and widespread', the Large Red Damselfly (*Pyrrhosoma nymphula*) as 'generally distributed but always in very small numbers' and the Banded Demoiselle (*Calopteryx splendens*) as 'common along the rivers and their main tributaries'. These descriptions are still valid today.

Less valid now are Ray Palmer's comments on other species. Of the Common Blue Damselfly (*Enallagma cyathigerum*) he says 'fairly common and sometimes abundant locally but less so than the Azure Damselfly (*Coenagrion puella*)' which is 'very common in most localities'. The position is now reversed. *Enallagma* is present in thousands on nearly all new pits whereas *Coenagrion puella* prefers smaller ponds with some shelter and so took a hammering with the loss of farm ponds. It seems to be able to colonise suitable garden ponds and so may be staging a come-back. Another species that has suffered recently but may be recovering is the White-legged Damselfly (*Platycnemis pennipes*). D. W. Snow considered it the 'commonest damselfly on the Ouse' in the 1940s and it was also common on the Ousel near Leighton Buzzard. It was greatly affected by the canalisation of the Ouse downstream of Bedford in the 1970s and for some years was virtually absent. Its numbers seem to be building up again. The Red-eyed Damselfly (*Erythromma najas*) was also regarded by Ray Palmer as a river species and he states that it was 'frequent in some parts of the Ouse'. This is still true, especially upstream of Bedford, but now its most characteristic habitat is old, shallow pits with plenty of the floating leaves of water lilies or the broad-leaved pondweed (*Potamogeton natans*). So far about six such sites have been recorded as containing this species. We now have about twice that number of sites for the Emerald Damselfly (*Lestes sponsa*). This species was described by Ray Palmer as 'apparently rare' and had not been taken by him when the 1947 article was written. It favours shallow pits or large ponds with lots of emergent vegetation.

Finally there are two damselflies present in the decade after the war which have not recently been recorded in the county. One is the Scarce Emerald (*Lestes dryas*). Only a single specimen has ever been captured in Bedfordshire — a female taken from Heath and Reach by D. A. Reid in 1950. The other species might still be present as it is found in at least four gravel pits in Hunts. It is the Variable Damselfly (*Coenagrion pulchellum*), described by Ray Palmer as 'rare and local'. He gives three locations on the River Ouse and one at Grovebury Pits.

So the overall picture is that *Aeshna mixta*, *Anax imperator*, *Orthetrum cancellatum*, *Libellula quadrimaculata*, *Sympetrum sanguineum*, *Enallagma cyathigerum*, *Erythromma najas* and *Lestes sponsa* seem to have become more abundant and widespread in the last 40 years benefiting from the increase in water-filled pits, while the status of *Aeshna cyanea*, *A. grandis*, *Libellula fulva*, *Sympetrum striolatum*,

Ischnura elegans, *Pyrhosoma nymphula*, *Calopteryx splendens* and *Cordulegaster boltonii* remains unchanged. On the debit side *Aeshna juncea*, *Sympetrum danae*, *Coenagrion pulchellum* and *Lestes dryas* have not been recorded since Ray Palmer's time and *Libellula depressa*, *Coenagrion puella* and *Platynemis pennipes* have suffered decreases due to habitat changes from which they appear to be recovering.

I have kept the most exciting news until the end of my report. On July 7th and July 10th 1987 John Comont, the Conservation Officer of the Beds. and Hunts. Wildlife Trust, discovered two small colonies of the Scarce Blue-tailed Damselfly (*Ischnura pumilio*) in the south of the county. This is a nationally rare species, hitherto unknown not only in Bedfordshire but also in all the surrounding counties, its stronghold being in the New Forest, Wales and the West Country.

It is not impossible that other rare species await discovery.

NANCY DAWSON

ISCHNURA PUMILIO (SCARCE BLUE-TAILED DAMSELFLY) IN BEDFORDSHIRE

by John Comont

Whilst conducting survey work in a large chalk quarry complex at Sundon in July 1987, I was surprised to observe a number of specimens of *Ischnura pumilio* flying low over a wet seepage zone in the base of one of the quarries. I was familiar with the species from West Wales and did not immediately appreciate the significance of my find.

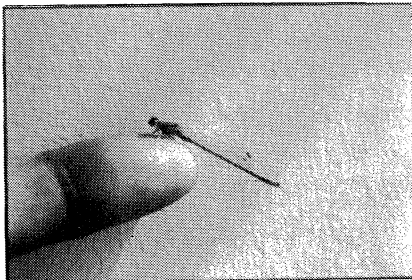
I visited the site the following day to look more closely at the distribution of *I. pumilio*. No more than a dozen individuals were found flying over an area in which water was seeping gently over bare uncompacted chalk, some pairs were in tandem and were observed ovipositing. The area was dominated by clumps of *Juncus inflexus*. The seepage zone appeared to be permanently wet. Adjacent shallow permanent ponds were populated by large numbers of *Ischnura elegans* but no *I. pumilio* were found. *I. elegans* also occurred in the seepage zone in greater numbers than *I. pumilio* but subtle behavioural differences were evident.

On impulse I looked for similar habitat at Houghton Regis Chalk pit. *I. pumilio* was located within 30 minutes of arriving on site!

One specimen was taken from each population and sent, via NCC, for determination by the national recorder. The specimens are now in the collection at Bedford Museum.

Nationally *I. pumilio* occurs in over 90 10km squares post 1960. All records are west of a line drawn from Anglesey to the Solent. There are only three old records east of this line. Further searching in suitable habitat is needed before the true significance of this find can be assessed.

Address: Beds and Hunts Wildlife Trust, Priory Country Park, Barkers Lane, Bedford MK41 9SH



Scarce Blue-tailed Damselfly Ischnura pumilio
(Photo: John Comont)

LACEWING FLIES (Neuroptera) Report of the Recorder

At least four species have been added to the county list bringing the total to 34, about 60% of the 57 British species. The discovery of *Drepanepteryx*, unfortunately not as exciting as at first thought, has already been mentioned in the *Muntjac* (No. 69:6-7) but some details are repeated below and an excellent photograph by Derek Rands reproduced, surely the finest illustration of this insect yet published but which of course does not do justice to the original transparencies. I find I have overlooked some corrections sent to me many years ago, one of which is a new record. The bulk of this report is taken up by detailed lists of species taken at light traps in six Bedfordshire localities very kindly sent to me by Ian Woiwod of Rothamsted Experimental Station. I have not condensed this information as much as I might since it gives extensive data on populations at various times of the year and undoubtedly highlights which are the commonest species. Some, however, apparently are not attracted to light. Several of the records long predate others previously reported as first county records and at least two others are of insects not previously recorded (indicated by *). Unfortunately the material was not retained so is not available for checking which is unfortunate in the case of *Chrysopa phyllochroma*. Grateful as I am for this mass of information, the slaughter of so many hundreds of beneficial insects saddens me.

Micromus variegatus (Fabr.) reported from light traps as follows: Luton, 11.8.74 (1); Sandy, 14.8.73 (1); Cockayne Hatley, 19-31.8.79 (2), 27.8.80 (1), 9-21.8.82 (3). Nearly all these predate my record from Henlow.

**M. paganus* (L.). Reported from light traps as follows: Whipsnade (Site 208), 7-19.6.73 (5), 9.7.73(1); (Site 229), 28.5.73 (1), 7-29.6.73 (16), 1-16.7.73 (8), 1.8.73 (1); Sandy, 20-28.5.73 (4), 8-30.6.73 (4), 17.8.73 (1); Shuttleworth, 8-11.6.76 (3); Cockayne Hatley 5-13.6.76 (10), 23.7.76 (1), 31.5.78 (1), 1-30.6.78 (2), 5-28.6.79 (6), 3.5.82 (2), 1-3.6.82 (2). In all 67 specimens so it is a sobering thought that this species does not appear to have been previously recorded for the county!

Hemerobius humulinus L. Reported from light traps as follows: Whipsnade (Site 208) 9.6.73 (2), 1-27.9.73 (1), (Site 229) 30.5.73 (1); Sandy 24.8.73 (1); Shuttleworth 1-30.8.73 (2), 24.9.77 (1); Cockayne Hatley, 28.7.79 (1).

H. simulans Walker. Maulden Wood, 25.6.76 (B.S. Nau). This long predates the record from Studham I claimed as first for the county.

H. stigma Stephens. Reported from light traps as follows: Sandy, 26.5.73 (1), 16-30.6.73 (9), 1-12.7.73 (3), 9.8.73 (4), 4.10.73 (1); Shuttleworth, 15.7.73 (1), 5.9.77 (1); Cockayne Hatley, 4.5.73 (1).

**H. atrifrons* McLachlan. Reported from light traps as follows: Whipsnade (Site 208), 27-30.5.73 (3), 12-24.6.73 (2), 4-22.7.73 (2), 5-13.8.73 (2), 1-5.10.73 (1). Not previously recorded.

**H. pini* Stephens. Maulden Wood, 25.6.76 (B.S. Nau). I had identified this as *H. humulinus* but Dr Barnard corrected this. For some reason I forgot to mention this in previous reports although it appears to be the only record for the county.

H. nitidulus Fabr. Reported from light traps as follows: Whipsnade (Site 229), 2.7.73 (1); Sandy, 23.5.73 (1), 2.6.73 (1), 16.7.73 (1), 1-27.8.73 (3), 21.9.73 (1).

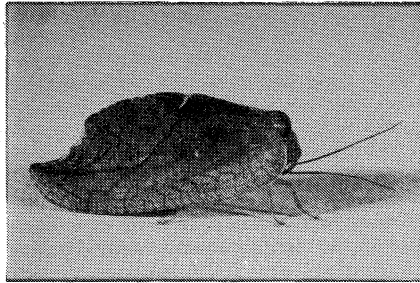
H. micans Ol. Reported from light traps as follows: Luton, 8.9.74 (1); Whipsnade (Site 208), 27.5.73 (1), 12.6.73 (1), (Site 229), 30.5.73 (1), 13.7.73 (1).

H. lutescens Fabr. Reported from light traps as follows: Luton 12-14.9.74 (2); Whipsnade (Site 208), 8-24.6.73 (6), 1-18.7.73 (13), 4-31.8.73 (7), 28.9.73 (5), (Site 229), 7-27.6.73 (6), 1-9.7.73 (2), 27.8.73 (1), 3.9.73 (2); Sandy 8-20.6.73 (2), 10.7.73 (1), 20-31.8.73 (3), 1-9.9.73 (6); Shuttleworth, 14.7.76 (1); Cockayne Hatley, 21.6.76 (1), 2-16.8.76 (2), 8.9.79 (1), 13.7.82 (1).

(*H. marginatus* Stephens. This species almost certainly occurs in the county having been taken in the NW of Kings Wood only a few hundred yards from the Bedfordshire/Buckinghamshire border).

Wesmaelius rarus (Withycombe). Reported from a light trap as follows: Sandy, 24.8.73 (1).

- W. betulinus* (Ström). Reported from light traps as follows: Whipsnade (Site 208), 6-27.6.73 (3), 30.8.73 (1), 28.9.73 (1), (Site 229), 26-31.5.73 (3), 6.6.73 (1), 1.7.73 (1), 3.9.73 (1); Sandy, 13-30.5.73 (2), 30.6.73 (1), 16.8.73 (2); Shuttleworth, 15-20.10.77 (2); Cockayne Hatley, 20.8.78 (1), 23.9.78 (1), 25.9.79 (1).
- W. subnebulosus* (Stephens). Reported from light traps as follows: Luton, 10-18.9.74 (11); Whipsnade (Site 208), 25-27.5.73 (6), 1-30.6.73 (24), 1-22.7.73 (15), 4-31.8.73 (22), 28.9.73 (1); (Site 229), 7-29.6.73 (12), 1-31.7.73 (31), 27.8.73 (1), 3.9.73 (4); Sandy, 17-30.5.73 (14), 6-27.6.73 (9), 1-31.7.73 (24), 1-28.8.73 (64), 1-19.9.73 (10); Shuttleworth, 15-18.7.76 (3), 28.5.77 (1), 5-24.7.77 (2), 5-26.6.77 (2), 5-13.10.77 (2); Cockayne Hatley, 28.6.76 (1), 4.7.76 (1), 13-19.8.76 (3), 31.5.78 (1), 2.6.78 (1), 20-21.8.78 (2), 23.9.78 (1), 5.6.79 (1), 16-28.7.79 (4), 12-31.8.79 (14), 5-11.9.79 (7), 28.7.80 (1), 16.7.82 (1).
- Symphorobius elegans* (Stephens). Reported from light traps as follows: Sandy, 9.6.73 (1); Cockayne Hatley, 29.7.78 (2). This predates Mrs Rands 1986 record by 13 years.
- **Drepanpteryx phalaenoides* (L.). Kings Wood, Heath and Reach, Compartment 1, E. of Stockgrove Park. A single female was taken by the recorder in the company of Mrs Rands on 25.9.87 at SP 924293 by extensive sweeping of the shrubby oaks, hazel and field maple right by the roadside. It was in fact the only lacewing seen save for one *Chrysopa* larva during the whole day. At the time I had no idea it had turned up in several southern counties and was much elated at the discovery. There are records from Hunts., Herts., Berks., Surrey, Sussex and Kent all since 1976 and an ancient record for Sussex. Since the species is known to hibernate I attempted to keep it through the winter but failed.



Drepanpteryx phalaenoides, Kings Wood, Heath and Reach, 25.9.87.

(Photo: Derek Rands)

- Chrysopa ciliata* Wesmael. Reported from light traps as follows: Whipsnade (Site 208), 4-20.7.73 (2); Shuttleworth, 17.7.76 (1).
- C. flavifrons* Brauer. Reported from light traps as follows: Sandy, 7.8.73 (1); Shuttleworth, 18-27.7.76 (3), 13-29.8.76 (2), 19-22.7.77 (2), 28.8.77 (1); Cockayne Hatley, 9-14.7.76 (3), 7.7.77 (1), 29.7.78 (1), 20.8.78 (1).
- C. albolineata* Killington. Reported from light traps as follows: Luton, 11.8.74 (1); Whipsnade (Site 208), 27.6.73 (1), 6-12.7.73 (2), 4.8.73 (1), (Site 229), 15-29.6.73 (2), 1.8.73 (1); Sandy, 16-28.6.73 (6), 25-31.7.73 (3), 1-10.8.73 (6); Shuttleworth, 19.6.76 (1), 13.9.73 (2), 13-29.8.76 (2), 15.8.77 (1), 10-11.9.77 (3); Cockayne Hatley, 19-25.6.76 (2), 3.7.76 (1), 24.8.76 (1), 29.7.78 (1), 24.7.79 (1), 9.8.82 (1).
- C. carneae* Stephens. Reported from light traps as follows: Luton, 11.8.74 (1), 15.10.74 (1); Whipsnade (Site 208), 12.7.73 (1), 2-31.8.73 (50), 9.73 (54), 5.10.73 (1), 1-13.11.73 (5), (Site 229), 11.6.73 (2), 7.73 (29), 28.8-3.9.73 (27); Sandy, 20.5.73 (1), 11-31.7.73 (23), 1-30.8.73 (127), 1-27.9.73 (24), 2.10-3.11.73 (26); Shuttleworth, 7.6.76 (1), 13-29.7.76 (86), 6-14.8.76 (3), 8-27.9.76 (6), 1-22.10.76 (19), 9.5.77 (1), 29.6.77 (1), 22-30.7.77 (3), 8.77 (50), 1-29.9.77 (104), 2-27.10.77 (38), 19.12.77 (1); Cockayne Hatley, 4-21.5.76 (7), 6-29.6.76 (12), 1-

- 26.7.76 (96), 11-25.8.76 (10), 5-27.9.76 (3), 1.10.76 (1), 3.7.77 (1), 10-31.8.77 (14), 5-11.9.77 (3), 5-19.10.77 (5), 31.5.78 (2), 2-28.6.78 (8), 12.7.78 (1), 20-31.8.78 (5), 9-25.9.78 (7), 9-11.10.78 (3), 8-14.5.79 (4), 17.6.79 (1), 24.7.79 (1), 16-30.8.79 (3), 6-18.9.79 (6), 2-9.10.79 (8), 25.5.80 (2), 2-16.6.80 (6), 5.7.80 (1), 1-27.8.80 (17), 27.9.80 (2), 1.10.80 (1), 5.6.82 (1), 6-31.7.82 (13), 3-13.8.82 (6), 10-18.9.82 (5), 3-20.10.82 (6), 3-11.82 (1).
- C. septempunctata* Wesmael. Reported from light traps as follows: Whipsnade (Site 226), 27.8.73 (1); Sandy, 14.6.73 (1); Shuttleworth, 5.9.77 (1).
- C. ventralis* Curtis. Reported from light traps as follows (subsp. not stated). Whipsnade (Site 229), 26.6.73 (1), 10-13.7.73 (2); Sandy, 12.7.73 (1), 12.8.73 (1); Shuttleworth, 13.7.76 (1); Cockayne Hatley, 15-24.7.76 (2), 10.8.77 (1), 29.7.78 (2).
- C. phyllochroma* Wesmael. Reported from light traps as follows but possibly confused with the very similar *C. commata* Kis & Ujhelyi; nevertheless these records are of great interest. Sandy, 25-29.6.73 (6), 13.7.73 (1), 12-19.8.73 (3); Shuttleworth, 18-30.7.76 (2), 1-21.8.76 (3), 16.8.77 (1); Cockayne Hatley, 27.6.76 (1), 6-19.7.76 (4), 2-24.8.76 (15), 10-18.7.82 (2), 5.8.82 (1).
- C. perla* (L.). Whipsnade (Site 208), 7-8.6.73 (4), 1-14.7.73 (2); Sandy, 1-5.7.73 (2); Cockayne Hatley, 26.6.76 (1), 19.7.80 (1).

B. VERDCOURT

BUTTERFLIES (Lepidoptera)

Report of the Recorder

The year started as it intended to continue later and was cold and wet well into April, but then the weather changed to bright sunny spells and the butterflies started their year, a bit late but at least they were on the wing. Brimstones were well in evidence with all the common white species and the over-wintered Small Tortoiseshells and Peacocks were active everywhere. Even the odd Painted Lady was seen by the end of the month and so the stage was set for another year of observations. This good spell of weather lasted for a few weeks but by the end of May the spring weather was over and the rain returned until the end of July. There were some fine days but they were few and far between which made life extremely difficult for the small army of part-time observers, as the chance of a fine day combining with available time to carry out some butterfly watching were all too often the exception rather than the rule. Even so, by the time August came the summer species were only just on the wing, but as the weather started to improve large numbers of Meadow Brown, Gatekeeper, Ringlet and Large Skipper were seen. Red Admirals were very plentiful, numerous enough for one observer to suggest that this was 'the Year of the Red Admiral'.

Much excitement was created in the middle of the month when Vic Arnold caught an unusually marked Skipper at Sharnbrook Summit. At first sight it was thought to be a Silver-spotted Skipper (*Hesperia comma*) but after referring to the scientific collection built up by Richard Revels, it was seen to be an abnormally marked specimen of the Large Skipper (*Ochlodes venata*). This exercise did prove the necessity of having a cabinet collection as a reference, a fact that is often overlooked by some well-meaning amateur naturalists.

The other important event to occur just a few days before was the sighting of a Purple Emperor butterfly at Reddings Wood just north of Ampthill. It was back in July 1984 that one was reported by Andy Tomczynski from Marston Thrift but as there were no other sightings, and the species had never been recorded from this area before, it was thought to have been a bred specimen and therefore not reported in this Journal. However, with this second specimen turning up at the beginning of August near Ampthill, it is possible that the earlier sighting could have been a naturally wild specimen. One factor that cannot be ignored is that when butterflies are bred in captivity they normally emerge two to three weeks earlier than they would naturally. The Reddings Wood specimen was seen later than would naturally occur and is even more probably a naturally wild one. It is therefore possible that a small colony exists along the Greensand Ridge and it is known that they are a very powerful species, the males of which can and do fly great distances. Even more evidence

comes from Brian Sawford's book *The Butterflies of Hertfordshire* published later in this year. This shows that Purple Emperor does exist to the east of the Greensand Ridge but once again with very sparse sightings. All this evidence may be misleading and there may not be a colony in the area at all, but it is considered worthwhile reporting these events here for future reference.

As September came to a close there was a population explosion of Small Tortoiseshell. Everyone seems to have seen masses of them in their gardens, and in the wild, but the luckiest of all was Tony Smith who came across a small patch of thistles by the river near his home at Carlton where he says there must have been three to four hundred in a small area. A truly memorable sight.

The year had mixed fortunes, many species were seen in very small numbers, such as Wall Brown, Holly Blue, Small Copper, Wood White and Small Heath, while White-letter Hairstreak, Dark Green Fritillary and White Admiral were hardly seen at all. On the other hand Comma, Red Admiral, Small Tortoiseshell, Ringlet and Meadow Brown fared very well indeed with all the other common species being seen normally. It must be noted that this was the wettest year since 1937 so it is small wonder that the records reflect the mixed fortunes of butterflies.

Finally there are two observations that must be reported as unusual events. The first made by Alan Outen who collected 26 Large White larva for a planned photographic series depicting their life history, only to find that all were parasitised by the larva of *Apanteles glomeratus*. This shows the extent of predation to which some species are subjected. The second was made by Mrs Ramplin of Potton who found a live Speckled Wood roosting in her display of Christmas Cards —just as the year came to its end. That is the most unusual Christmas present I have ever heard of!

ACKNOWLEDGEMENTS

Once more it is my pleasure to thank all those dedicated persons who have contributed towards this year's records.

C. Aldridge, D. Anderson, V. Arnold, J. Barnwell, Mr and Mrs Bowskill, C. W. Burton, B. Clutten, M. Evans, L. Field, Mr and Mrs Hooper, L. Harrett, A. Outen, L. and D. Parsons, J. Payne, G. Pilkington, S. Pittman, G. Roe, D. Smith, T. Smith, B. Stephenson, P. Trodd.

ALAN J. MARTIN

BUMBLE-BEES (Hymenoptera - *Bombus* sp.)

Report of the Recorder

On 30th May, 1987, the Recorder led a Bumble-bee morning at Priory Country Park, where a party of young naturalists took part in a "Watch" of bumble-bees. On that rather cold morning, a few bees were seen.

Mr R. Allen of Harrold sent in an interesting record of "thousands" of dead bees under the trees in the middle of the village, in mid-May. Another, though much smaller, mortality occurred in Flitwick at about the same time.

Several bumble-bee road casualties were collected during the summer, and thanks are due to those few who submitted records.

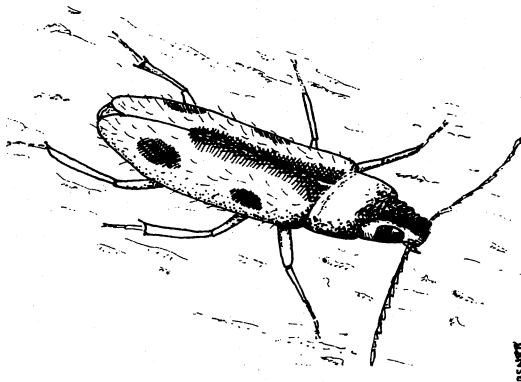
J.P. KNOWLES

SOME BEETLE AND OTHER RECORDS

by B.S. Nau

On 25th April 1987 I visited Tiddenfoot Country Park with a view to looking for *Bledius* spp in the sandy 'beach' bordering the flooded sandpit. In this I was rewarded and found the burrows of *B. gallicus* (last recorded in the *Victoria County History*) fairly numerous in areas of firm damp sand-silt within 2-3m of the water's edge. Thinking to find more of this unusual Staphylinid beetle I went next to a disused quarry adjoining Kings Wood at Fox Corner, Heath and Reach where there is open shallow water and bare damp sand. I quickly found burrows but was surprised on excavating one or two to find specimens of an unfamiliar Carabid ground-beetle. These proved to be *Bembidion pallidicorne* Illiger, new to Beds and a local species of 'sterile sand near sea-water'. This beetle has distinctively whitish-yellow elytra.

On 25th April I was exploring the bare ground of a fallow sandy field at Clophill and saw numbers of a small yellowish Anthicid beetle with dark spots and a curious warty 'horn' protruding from the thorax over the head (see figure). These proved to be *Notoxus monoceros* (L), also last recorded in the *Victoria County History*. They were present on a subsequent visit on 30th August and one was also seen to the SW of Maulden Wood in another fallow sandy field.



Notoxus monoceros

(Bernard Nau)

Agapanthia villosoviridescens is a Longhorn beetle which now appears to be not uncommon in the county, on 13 June I saw one in the chalk cutting off the A5 at Sewell — together with a Small Blue butterfly and a Hummingbird Hawk-moth. I have received a number of other records over the past few years. Another Longhorn encountered during 1987 was *Rhagium bifasciatum*, three at Lowes Wood, Woburn on 31st May and another on the edge of Kings Wood (Heath and Reach) on 5th July.

It is interesting to note that the damselfly *Lestes sponsa* is now established in the Maulden Woods area, though never recorded there during intensive survey work in the mid-1970's. Five were at a fire water-tank near Green End on 2nd August, and two (one ovipositing) at Church Meadow Pond on 20th September. At the latter site on the same day two Water Spiders, *Argyroneta aquatica* were seen (possibly new to Beds) and the Water Fern, *Azolla filiculoides*, was noticed, scattered over a few square metres — not a desirable addition to the flora of one of our best ponds! Finally, it may be noted that Lesser Teazel (*Dipsacus pilosus*), present in the mid-70's, still survives in the NE corner of The Dell in Maulden Woods, about five plants were there in 1987.

Address: 15 Park Hill, Toddington, Dunstable, Beds LU5 6AW

MACRO-MOTHS (Lepidoptera)

Report of the Recorder

The combination of wet, cold and windy weather that was experienced during 1987 contributed towards another frustrating year for fieldwork in the county. However, thanks to the usual enthusiasm of a small group of helpers, a remarkable amount of recording was achieved. This can best be illustrated by the map showing the number of species recorded on a 10Km basis, and the 24 additional species that have now been recorded from all of the 10Km squares in the county.

Moth trapping took place at most of the well established sites within the county, and several new sites were also visited. D.V. Manning and R. Passley investigated West Wood, Knotting and provided a large number of new records from an under-recorded part of the county. Priory Park, Bedford was worked by S. Finney and R. Passley and several interesting species were recorded there. I had two new sites to look at: Sharpenhoe Clappers, Streatley and Duloe Brook, near Bushmead.

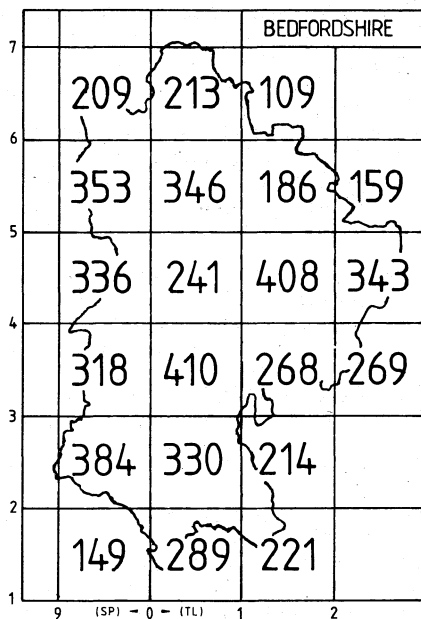
During the very warm weather that did occur in April, the following moths were seen in the county earlier than normal. Common Wainscot, 22nd April in R.B. Stephenson's light trap at Bromham; Silver Y, 23rd April in A.J. Martin's garden in Ampthill; Lime Hawk Moth, 29th April, at light, in Maulden Woods.

In the course of 1987, two of my regular contributors left the county, T.S. Hollingworth for France, and G. Ping for Brunei. I take this opportunity to thank them for their help in the past, and to wish them luck in their new countries. The death of Roy Collings in June 1987 was a great loss as not only was he a first class naturalist, but Roy had regularly supplied records, and had in many ways, provided help and encouragement with the survey of the moths of Maulden Woods.

SPECIES LIST

The following list contains new species and comments on species of particular interest where required. Species marked * are new county records. All numbers and English names as per *A Recorder's Log Book or Label List of British Butterflies and Moths* by J.D. Bradley and D.S. Fletcher (Curwen, London 1979).

- 1647 **Barred Hook -tip** Taken at light at Maulden Woods, and by J.B. Barnwell, at Aspley Guise. An uncommon Bedfordshire moth.
- 1651 **Chinese Character** 1987 was a good year for this species. It can be found throughout the county but never usually in large numbers.
- 1677 **Birch Mocha** At light, King's Wood, Heath and Reach, by the recorder, 13/8/87. This moth was also recorded by the late K. Webb at Warren Wood, Clophill in May 1984.



Number of species recorded in each 10km square — as at 31.12.87.

- 1690 **Small Blood-vein** Very few records received for this species during 1987. Normally considered to be common.
- 1692 **Lesser Cream Wave** At light, Waterloo Thorns, Tempsford, by the recorder, 14/7/87. An uncommon Bedfordshire moth.
- 1736 **Royal Mantle** At light, Sharpenhoe Clappers, by the recorder, 29/6/87. A very scarce Bedfordshire moth.
- 1803 **Small Rivulet** Recorded at a number of sites throughout the county. Both 1986 and 1987 were good years for this moth.
- 1825 **Lime-speck Pug** Common, found throughout the county.
- 1883 **Yellow-barred Brindle** An uncommon Bedfordshire moth — recorded at King's Wood, Heath and Reach, by the recorder, and at Priory Park, Bedford, by S. Finney and R. Passley.
- 1888 **Scorched Carpet** This attractive moth was recorded at various sites in the county during 1987, although never in large numbers. Areas where its larval food plant, Spindle, occurs usually produce specimens.
- 1925 **Small Brindled Beauty** At light in February and March, 1987, West Wood, Knotting, by D.V. Manning and R. Passley.
- 1947 **The Engrailed** A common moth that can be found throughout the county in wooded areas.
- 1957 **White-pinion Spotted** This normally common species was only recorded from one site in Bedfordshire during 1987 — at Coppice Wood, Melchbourne, by the recorder, on 29th May, at light.
- *1987 **Bedstraw Hawk-moth** First county record for this migratory moth, at light, London Road, Biggleswade, 23/7/87 by R. Revels.
- 1992 **Small Elephant Hawk-moth** Recorded on 24/6/87, by R. Passley from a light trap at Pavenham. The larvae of this species could be feeding on Purple Loosestrife which is abundant by the River Ouse.
- 2031 **White Satin Moth** After a number of years when this moth was seen at many sites in the county, only one record was received for this species in 1987. This was from Pavenham, recorded by R. Passley.
- 2138 **Green Arches** Recorded in good numbers at West Wood, Knotting, by D.V. Manning and R. Passley.
- 2171 **Marbled Coronet** Recorded in light traps in the gardens of R. Passley in Pavenham and H. Winter in Luton.
- 2262 **The Brick** Recorded at light, West Wood, Knotting, by D.V. Manning and R. Passley. This species is an uncommon Bedfordshire moth.
- 2338 **Rufous Minor** This species can be found throughout the county. Care is needed with the identification of the whole of the "Minor" group of moths. Adrian Riley of Rothamsted has given much assistance with this problem.
- *2343(A) **Lesser Common Rustic** *Mesapamea secalella* A specimen of this moth came to light at King's Wood, Heath and Reach on 13/8/87. The identification being confirmed by means of the genitalia, by A. Riley's department at Rothamsted.
- 2371 **Brown-veined Wainscot** At light, Priory Park, Bedford, on 15/8/87, by R. Passley and S. Finney. A rare Bedfordshire moth.
- 2418 **Cream-bordered Green Pea** At light, Waterloo Thorns, Tempsford, on 14/7/87, by the recorder. This attractive moth is rarely recorded in the county.
- 2422 **Green Silver-lines** This very attractive moth was recorded at a variety of sites during 1987. It can be found throughout the county during June and July.
- 2439 **Gold Spot** Taken at light, by J.B. Barnwell, at Aspley Guise, in July 1987. This is only the second time that this moth has been recorded from the county.

ACKNOWLEDGEMENTS

My sincere thanks go to the following for help and assistance.

N. Agar, T. Aldhous, C. Baker, J.B. Barnwell, Mr and Mrs E.G. Bowskill, Miss R. Brind, Miss J. Childs, L. Field, S. Finney, Mrs M. Harding, C. Higgs, T.S. Hollingworth, Mr and Mrs J. Howe, Hon. H. de B. Lawson Johnston, D.V. Manning, A.J. Martin, A.R. Outen, D. Parsons, R. Passley, G. Ping, R.C. Revels, A. Riley, R.B. Stephenson, H. Winter, I. Woiwod.

SPECIES RECORDED IN ALL 10KM SQUARES IN BEDFORDSHIRE

1653	Buff Arches	2102	Flame Shoulder
1669	Common Emerald	2109	Lesser Yellow Underwing
1682	Blood Vein	2111	Lesser Broad-bordered Yellow Underwing
1724	Red Twin-spot Carpet	2123	Small Square Spot
1727	Silver-ground Carpet	2126	Setaceous Hebrew Character
1742	Yellow Shell	2155	Dot Moth
1922	Swallow-tailed Moth	2193	The Clay
1931	Peppered Moth	2198	Smoky Wainscot
1941	Mottled Beauty	2299	Mouse Moth
1958	Clouded Silver	2343	Common Rustic
2011	Pale Prominent	2442	Beautiful Golden Y
2098	The Flame	2443	Plain Golden Y

V.W. ARNOLD

MICRO-MOTHS (Lepidoptera)**Report of the Recorder**

During the year thirty species have been added to the county list, which now totals 664 species of microlepidoptera. A number of these new records are from specimens obtained in earlier years but only recently identified. This year has seen the departure of two valuable field-workers, Terry Hollingworth and Glenn Ping. Both are now working abroad and I thank them for their contributions to our county records and wish them well in their new careers.

During a survey of the moths at West Wood, Knotting, we caught a specimen of the European Vine Moth (*Lobesia botrana*) which is the second recorded occurrence of the species in Britain.

In Terry Hollingworth's collection a specimen of *Coleophora therinella* has been confirmed as the first British record of the female of this species.

The species added to the county list are:

Nepticulidae

Stigmella aeneofasciella — leaf mines on agrimony at Tempsford in early November.

S. suberivora — leaf-mines on holm-oak at Woburn Abbey (21 September 1986)

Psychidae

Luffia ferchaultella — larval cases at Stotfold.

Tineidae

Morophaga choragella — Pegsdon Hills (15 July 1986)

Nemapogon wolffiella — Worley's Wood, Melchbourne (10 August)

Triaxomera fulvimitrella — Coppice Wood, Melchbourne (24 June 1986)

Monopis weaverella — Pegsdon Hills (8 June 1986)

Epermeniidae

Epermenia illigerella — Coppice Wood, Melchbourne (24 June 1986)

Coleophoridae

- Coleophora flavipennella* — Marston Thrift (21 July 1984)
- C. pyrrhulipennella* — larval case on heather at Sandy (2 November)
- C. troglodytella* — Bedford (15 July 1984)
- C. therinella* — Stotfold (18 July 1985)
- C. vestianella* — Sutton Fen (23 August 1986)

Ethmiidae

- Ethmia dodecea* — West Wood, Knotting (26 June)

Gelechiidae

- Teleiodes luculella* — Maulden Wood (23 July 1985)
- Bryotropha senectella* — Sharnbrook Summit (21 July 1986)
- Sophronia semicostella* — Stockgrove Country Park (11 July)

Momphidae

- Glyphipteryx linneella* — Sharnbrook (16 August)

Olethreutinae

- Lobesia botrana* — West Wood, Knotting (21 August)
- Ancylis comptana* — Stotfold (8 August 1986)
- Eucosma conterminana* — Stotfold (8 August 1986)
- Strophedra nitidana* — West Wood, Knotting (26 June)
- Pammene obscurana* — Coppice Wood, Melchbourne (29 May)
- Cydia funebrana* — larvae in wild plum at Stotfold (24 August 1986)
- C. fagiglandana* — Pegsdon Hills (21 July 1986)
- Dichrorampha consortana* — Thurleigh Cutting (6 July 1985)

Pyralidae

- Chilo phragmitella* — Henlow Grange gravel pit (10 August 1986)
- Eudonia truncicolella* — Old Warden Tunnel (17 August 1986)
- Cryptoblabes bistriga* — West Wood, Knotting (10 July)

Pterophoridae

- Oxyptilus parvidactylus* — Sewell Cutting (18 June)

REFERENCES

- BRADLEY J.D. and FLETCHER D.S. 1979 *A recorder's log book or label list of British butterflies and moths*
- BRADLEY J.D., TREMEWAN W.G. and SMITH A. *British tortricoid moths*
Vol. 1 1973 Cochylidae and Tortricidae: Tortricinae
Vol. 2 1979 Tortricidae: Olethreutinae
- GOATER B. 1986 *British pyralid moths*
- HEATH J. 1979 *The moths and butterflies of Great Britain and Ireland* (abbreviated MBGBI) Vol. 1
- HEATH J. and EMMET A.M. 1985 MBGBI Vol. 2
- MEYRICK E. 1928 *A revised handbook of British Lepidoptera*

ACKNOWLEDGEMENTS

I would like to thank the following for their contributions during the year:

V.W. Arnold, L. Field, T.S. Hollingworth, A.R. Outen, R. Passley, G. Ping, I.Woiwod.

DAVID MANNING

FLOWERING PLANTS, FERNS AND FERN ALLIES (Spermatophyta and Pteridophyta) Report of the Recorder

This, my first report as Recorder for this group, does not cover the county as a whole. Most of the year's recording was concentrated in one 10km square, TL15. The diagonal of this square stretches from Willington, in the south west, to St Neots, in the north east, taking in a little of Cambridgeshire. The reason for limiting the recording was because the Botanical Society of the British Isles is conducting a survey over the two years 1987-88 covering 1 in 9 of the 10km squares in the British Isles. The squares in Bedfordshire are TL15, the majority of which lies within our boundary, and TL12, the majority of which lies outside in Hertfordshire. A full report of the findings will be given in a future Journal.

Of the 576 species of plant that were recorded during the year in TL15, several uncommon ones were especially looked for in their known locations. It is pleasing to report that most were found, and hopefully the remaining ones will be found in 1988. The species include Large Bitter-cress (*Cardamine amara*), Thick-leaved Stonecrop (*Sedum dasyphyllum*), Dyer's Greenweed (*Genista tinctoria*) and Small-flowered Buttercup (*Ranunculus parvijlorus*), and the Heath Dog-violet (*Viola canina*) which also occurs at Heath and Reach. Several unusual Brome grasses were recorded, including Field Brome (*Bromus arvensis*) which had been feared extinct in the county. Two interesting new records for the 10km square were Mare's-tail (*Hippuris vulgaris*) and Mousetail (*Myosurus minimus*), the latter well outside its former more southerly range. It had not been recorded for about 10 years. Both these were reported by the Survey Team currently studying the Bedfordshire countryside.



Mousetail Myosurus minimus, Little Barford, 4.6.87

(Photo: Chris Boon)

One species, the Tasteless Water-pepper (*Polygonum mite*) was feared to be no longer with us. In John Dony's *Plant Atlas* (1976) there were 16 tetrad records but it had not been seen for many years. It favours damp conditions in ditches and by streams, a disappearing habitat. It was good to refine it, but it is not a spectacular looking plant.

Finally many thanks to those who have sent in records. Above all I would like to thank John and Chris Dony without whom the recording for the BSBI scheme would be rather less comprehensive.

CHRIS BOON

MOSSES AND LIVERWORTS (Bryophyta)

Report of the Recorder

The initial tetrad coverage of the county is now complete with an average of 37 species recorded per tetrad. During the next two years I intend to concentrate on more intensive recording at some of the more important Bryological sites in the county, some of which have only become apparent as a result of the tetrad survey.

One new species was added to the county list during 1987. This was *Leiocolea badensis* found by M. Yeo in a chalk quarry near Upper Sundon. It was growing mixed with *L. turbinata* which is reasonably common on the chalk. These two liverworts are both very small with stems only about 0.5cm long. They are only distinguished by cell size (30-35 μ m in *L. badensis* as opposed to 35-43 μ m in *L. turbinata*) and trigones (corner thickenings to the cells) present in *L. badensis*, absent in *L. turbinata*.

Other interesting records during the year included the following:-

Rhodobryum roseum ARO and C. Aldridge, Kings Wood, Heath and Reach. Found initially just outside the county boundary and subsequently a smaller patch within Bedfordshire. This is the first record of this handsome species since about 1950 and it was very fine material.

Leucobryum juniperoideum ARO and C. Aldridge, Kings Wood, Heath and Reach. Only the second record of this species in Bedfordshire. (The previous record was from nearby Stockgrove Park).

Campylium calcarium M. Yeo. Abandoned railway cutting near Turvey. 2nd recent record.

Brachythecium populeum M. Yeo. Abandoned railway cutting near Turvey. Only the second record for Bedfordshire.

My thanks to M. Yeo, C. Aldridge, Dr H.L.K. Whitehouse and Dr N.Dawson for records supplied during the year. I would still welcome further gatherings from urban areas from members of the Society especially those resident in Luton and Bedford.

ALAN R. OUTEN



Brachythecium rulabulum. A common Bedfordshire species of moss

(Photo: Alan Outen)

LICHENS

Report of the Recorder

A visit by Dr Shimwell to the Elstow Storage Depot south of Kempston (grid. ref. 42/045439) produced an interesting collection of terricolous lichens, two of which were new to the county. The lichens found were mainly *Cladonia* species, *C. coniocraea*, *C. fimbriata*, *C. furcata*, *C. glauca*, *C. humilis* and *C. ramulosa* — the latter two being new county records. A specimen of *Placyinthiella icmalea* was also recorded. These lichens were all growing amongst bryophytes on open banks of Callow or on fine clinker, and surrounded by *Festuca rubra*, *Cirsium acaule* and *Ononis spinosa*. These plants were rooted in the calcareous boulder clay of pH 7.6 at 15cm depth whilst the pH of the soil beneath the lichens was in the range of 4.5-5.0.

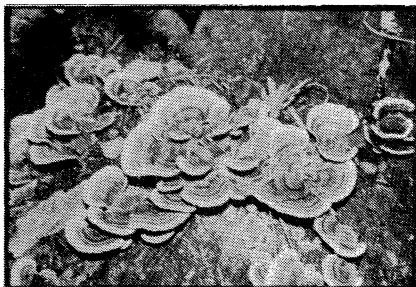
FRANCES B.M. DAVIES

THE FUNGUS FORAY, 1987

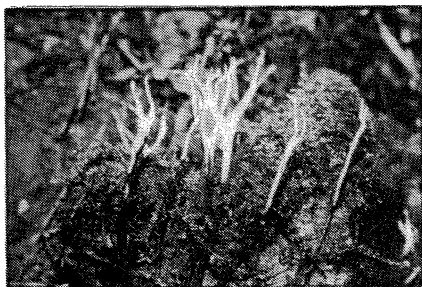
The fungus foray was held at Rowney Warren on Sunday 25 October and was led as usual by Dr D.A. Reid with about 40 members participating. Fungi were more abundant and varied compared with those collected in recent years, possibly because of the fact that areas with coniferous and deciduous trees were searched. In all 133 species were found but of these only five represented new additions to the county.

So are we beginning to reach a stage when we can expect to find fewer and fewer novelties on our annual fungus foray? And can we now say that the fungi of Bedfordshire are more or less fully documented? To both questions I answer a confident no! There are many, many more species to be discovered in the county and we still know relatively little of its mycological flora.

Of the new additions one was a rust *Puccinia glechomatis* on Ground-ivy and another a mildew *Erysiphe asperifoliorum* on Comfrey. The new agaric *Lepiota oreadiformis* is unusual in the genus as it inhabits grassland; in this case growing along the roadside verge. The cap, up to 3 cm diameter is campanulate, pale ochraceous, and often somewhat excoriate; the rest of the fruitbody is white or whitish. Under the microscope the large, ellipsoid-fusiform spores, 11.5-13.5 x 4.5µm are distinctive. The presence of the pure white, non-hygrophanous, small *Clitocybe candicans* was also confirmed.



Coriolus versicolor



Xylaria hypoxylon

(Photos: Alan Outen)

One of the new county records concerns a Jelly Fungus; *Calocera pallido-spathulata* is an endemic British species first described in 1974 from East Yorkshire on *Picea*, but since then it has become widespread throughout the country and is collected commonly on the wood of both coniferous and deciduous trees. The fruit bodies, up to about 1 cm high, are soft gelatinous, whitish to slightly yellowish and vary from club-shaped or fan-shaped to spathulate with a short but distinct stalk; the fungus may be somewhat longitudinally wrinkled and often crisped at the margin. It is frequently striking for the large numbers of pallid fruitbodies crowded along the length of fallen twigs and small branches. Its occurrence in Bedfordshire was to be expected.

The last novelty is the small Discomycete or 'Cup Fungus' *Pezizula livida* which grows saprophytically on coniferous substrates. It is recognized by the small, flat or convex, subsessile, erumpent, light orange-yellow or brownish discs, up to 2 mm diameter the spores are large, hyaline, 22-24 x 6-7 μ m, and become 3-septate at maturity.

SPECIES LIST

Amanita citrina A. *citrina* var. *alba*; *A. gemmata*; *A. muscaria*; *Armillaria mellea*; *Baeospora myosura*; *Boletus badius*; *B. chrysenteron*; †*Clitocybe candicans*; *C. clavipes*; *C.icolor*; *C. ditopa*; *C. flaccida*; *C. infundibuliformis*; *c. nebularis*; *C. odora*; *C. vibecina*; *Collybia butyracea*; *C. dryophila*; *C. erythropoda*; *C. fusipes*; *C. maculata*; *C. peronata*; *Conocybe pygmaeo-affinis*; *Cortinarius hemitrichus*; *Crepidotus variabilis*; *Cystoderma amianthina*; *Galerina hypnorum*; *G. mycenopsis*; *G. sideroides*; *Gymnopilus junonius*; *G. penetrans*; *Hebeloma crustuliforme*; *H. mesophaeum*; *H. sacchariolens*; *Hygrophorus hypothejus*; *Hypholoma fasciculare*; *Inocybe eutheles*; *I. lacera*; *Laccaria amethystea*; *Lactarius glycosmus*; *L. hepaticus*; *L. quietus*; *L. rufus*; *L. turpis*; *Lepiota cristata*; **L. oreadiformis*; *L. rhacodes*; *Marasmius androsaceus*; *M. oreades*; *Melanoleuca cinerascens*; *M. melaleuca*; *Mycena aetites*; *M. candida*; *M. epipterygia*; *M. fibula*; *M. galericulata*; *M. galopus*; *M. inclinata*; *M. leucogala*; *M. oortina*; *M. polygramma*; *M. pura*; *M. sanguinolenta*; *M. sepia*; *M. vitilis*; *Nolanea cetrata*; *Paxillus atrotomentosus*; *P. involutus*; *P. panuoides*; *Pluteus cervinus*; *Psathyrella hydrophila*; *P. squamosa*; *Psilocybe crobula*; *Russula atropurpurea*; *R. emetica*; *R. fragilis*; *R. nitida*; *R. ochroleuca*; *Stropharia aeruginosa*; *Tricholoma imbricatum*; *Tricholomopsis rutilans*; *Tubaria furfuracea*.

Auriscalpium vulgare; *Clavulinopsis helvola*; *Coriolus versicolor*; *Cristella candidissima*; *Daedaleopsis confragosa*; *Ganoderma adspersum*; *Hapalopilus nidulans*; *Heterobasidion annosum*; *Hirschioporus abietinus*; *Merulius tremellosus*; *Phlebia merismoides*; *Radulomyces confluens*; *Serpula himantoides*; *Skeletocutis amorphus*; *Stereum gausapatum*; *S. hirsutum*; *S. sanguinolentum*; *Strangulidium sericeo-mollis*; *Thelephora terrestris*; *Xenasma pseudotsugae*.

**Calocera pallido-spathulata*; *C. viscosa*; *Dacrymyces stillatus*.

Exidia glandulosa

Auricularia auricula-judae; *A. mesenterica*.

Melampsoridium betulinum; *Phragmidium violaceum*; **Puccinia glechomatis*; *P. lapsanae*; *P. malvacearum*.

Lycoperdon foetidum; *L. perlatum*; *Mutinus caninus*; *Phallus impudicus*; *Scleroderma citrinum*; *Sphaerobolus stellatus*.

Coryne sarcoides; *Cudoniella acicularis*; *Hyaloscypha leuconica*; **Pezizula livida*; *Rhytisma acerina*; *Scutellinia scutellata*.

Diatrype disciformis; **Erysiphe asperifolium* (on *Symphytum*); *E. heraclei*; *Microsphaera alphitoides*; *Nectria cinnabarina*; *Xylaria hypoxylon*.

Leocarpus fragilis.

* — New county record

† — Confirmation of existing record.

I am grateful to Dr G Cooper, of the Open University, Milton Keynes, for sending me a list of species which he collected on the foray and subsequently identified.

DEREK A. REID

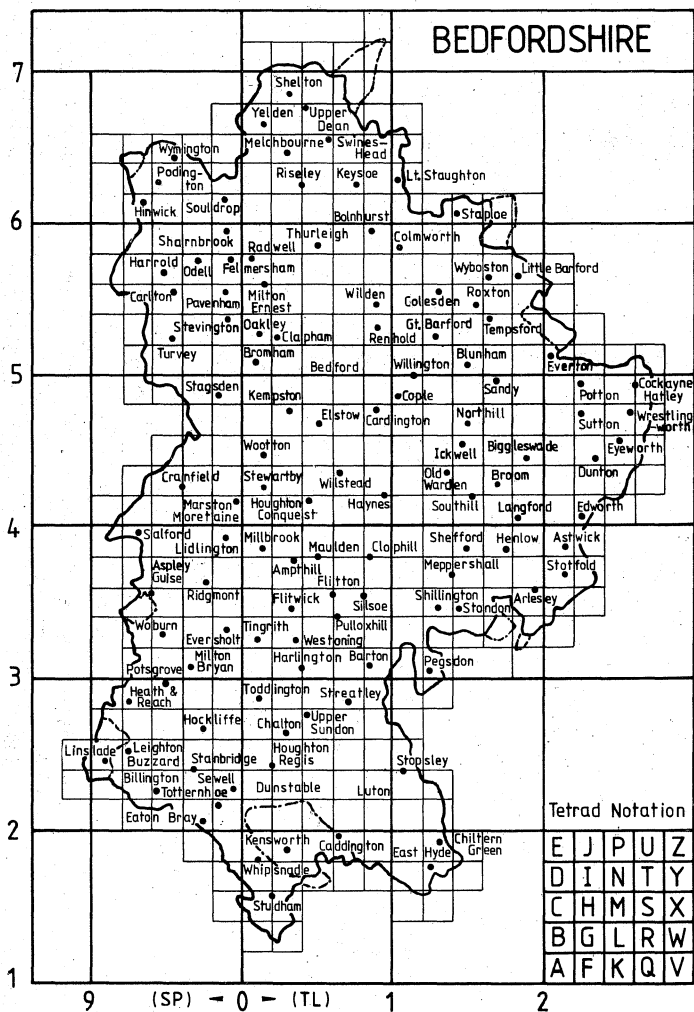
RECORDERS

- Meteorology*: Mr M.C. Williams, 2 Ivel Close, Barton-le-Clay, Bedford MK45 4NT
Geology and Palaeontology: Mr P.J. Smart, 46 Brecon Way, Bedford MK41 8DD
Mammals: Mr D. Anderson, 88 Eastmoor Park, Harpenden, Herts AL5 1BP
Birds: Mr P. Trodd, White Garth, 18 West Parade, Dunstable, Beds LU6 1EN
Reptiles and Amphibians: Mrs H.M. Muir-Howie, 19 Molivers Lane, Bromham, Bedford MK43 8JT
Fish: Mr A. Muir-Howie, 19 Molivers Lane, Bromham, Bedford MK43 8JT
Slugs, Snails and Leeches: Mrs E.B. Rands, 51 Wychwood Avenue, Luton LU2 7HT
Harvestmen and Pseudoscorpions: Dr A.J. Rundle, 219 Mortlake Road, Kew, Richmond, Surrey TW9 4EW
Dragonflies: Mr S. Cham, 45 Weltmore Road, Luton LU3 2TN
Grasshoppers and Crickets: Mr D.G. Rands, 51 Wychwood Avenue, Luton LU2 7HT.
Bugs: Dr B.S. Nau, 15 Park Hill, Toddington, Dunstable, Beds LU5 6AW
Lacewing Flies: Dr B. Verdcourt, The Herbarium, Royal Botanic Gardens, Kew, Richmond, Surrey TW9 3AB
Butterflies: Mr A.J. Martin, 18 Aragon Road, Amptill, Bedford MK45 2TL
Moths (macro): Mr V.W. Arnold, 96 St. Augustines Avenue, Luton LU3 1QE
Moths (micro): Mr D.V. Manning, 27 Glebe Rose, Sharnbrook, Bedford MK44 1JB
Hoverflies: Dr N.F. Janes, 82 Marston Gardens, Luton LU2 7DY
Bumblebees: Mr J.P. Knowles, 38A Steppingley Road, Flitwick, Bedford MK45 1AN
Ants: Dr A.J. Rundle, 219 Mortlake Road, Kew, Richmond, Surrey TW9 4EW
Ground Beetles: Dr W. Powell, 5 Lancotbury Close, Totternhoe, Dunstable, Beds LU6 1RQ
Mr J.E. Ashby, 10 Buckwood Avenue, Dunstable, Beds LU5 4PE
Woodlice, Centipedes and Millipedes: Dr A.J. Rundle, 219 Mortlake Road, Kew, Richmond, Surrey TW9 4EW
Flowering Plants, Ferns and Fern Allies: Mr C.R. Boon, 7 Duck End Lane, Maulden, Bedford MK45 2DL
Mosses and Liverworts: Mr A.R. Outen, 15 Manor Close, Clifton, Shefford, Beds SG17 5EJ
Lichens: Mrs F.B.M. Davies, "Rose Cottage", 69 The Hill, Wheathampstead, St. Albans AL4 8PR
Fungi: Dr D.A. Reid, The Herbarium, Royal Botanic Gardens, Kew, Richmond, Surrey TW9 3AB
Bird Ringing Co-ordinator: Mr D.S. Woodhead, 81 The Causeway, Carlton, Bedford MK43 7LU

THE SOCIETY

The Bedfordshire Natural History Society was formed in 1946 and its main function is to record the flora and fauna of the county. For this purpose it has over twenty active recorders, listed above, who cover most branches of natural history study, and whose annual reports are published in this journal. Members also receive a quarterly newsletter, *The Muntjac*, and programmes of meetings. These latter include field meetings to sites having a natural history interest within the county and occasional meetings further afield. During the winter months there are illustrated lectures, normally held at one of the following places: Bedford, Dunstable, Leagrave, Amptill or Flitwick.

The Society depends on the annual subscriptions which are devoted entirely to carrying out its work, as all officers are honorary. Membership is open to anyone, whether resident in the county or not.



Tetrad map of Bedfordshire showing the main towns and villages

Price per copy of *The Bedfordshire Naturalist*:

£3.50 (including postage) from the Membership Secretary, 9 Aspen Avenue, Putnoe, Bedford MK41 8BX

(Cheques payable to Bedfordshire-Natural History Society)

Typeset by Taylor Typesetting, Gothic Way, Arlesey, Bedfordshire