Biology Curators Group Newsletter

Title: A Brief Note on the Mammals and Birds Donated to the Booth Museum of Natural History from 1973-1978 (inclusive)

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A BRIEF NOTE ON THE MAMMALS AND BIRDS DONATED TO THE BOOTH MUSEUM OF NATURAL HISTORY FROM 1973-1978 (inclusive).

The specimens to which this article refers are all wild animals donated by members of the public and do not represent any deliberate scientific collecting. Given the haphazard manner in which these specimens are obtained, this sample cannot be said to be representative of the fauna of the South East. Animals whose sphere of activity overlaps with that of human beings, e.g. gardens, roadsides and beaches are far better represented than those of a more retiring nature. The majority are road casualties, quite a few have fallen foul of window panes and cats, the minority come from animal welfare centres or have been shot (legally) or drowned or poisoned.

This collecting system, such as it is, provides an invaluable source of fresh materials for our collections. Everything is entered on the museum's register and this information is then available for regional or national data banks. At very least the specimens provide useful training material for staff or trainees in museum preparation techniques, from Taxidermy to Histology. It is, however, a system which requires time and diplomacy to develop and maintain. I have found that tactful reminders, postage refunds and official thank you letters are an essential part of the procedure. The latter can also serve to establish the legal ownership of any specimen.

Pages 157-160 contain a list of the mammals and birds donated to the Booth Museum from 1973-1978:-

* These two entries (38 House Martins in 1974 and 35 Pied Wagtails in 1976) have for the purpose of the graphs and the totals each been trated as a single entry. My reason for this is that both represent freak occurences (the former somehow managed to get stuck in a very muddy field, and the latter were accidentally locked in a greenhouse for the weekend) and as such I do not think their inclusion would be justified.

Graph No. 3 shows the individual totals of species, each column represents a single species. The list on page 160 shows the numerical order of these species:-

	1973	1974	1975	1976	1977	1978	Total
Red Fox	2	2	1	2	2	4	13
Otter	0	0	0	0	0	1	1
Badger	0	2	3	1	1	2	8
Stoat	1	0	0	1	1	1	4
Weasel	0	0	0	0	2	3	5
Feral Mink	1	4	0	0	0	1	6
Long-eared Bat	0	0	0	2	1	0	3
Pipistrelle	0	0	0	0	1	1	2
Rabbit	0	0	0	4	0	2	6
Grey Squirrel	3	1	2	0	1	7	14
Wood Mouse	0	0	1	0	0	2	3
House Mouse	0	0	0	3	0	2	5
Yellow-necked Mouse	0	0	0	0	1	0	1
Bank Vole	0	0	0	1	0	1	2
Brown Rat	0	0	0	1	0	0	1
Short-tailed Field Vole	0	0	0	0	0	1	1
Mole	0	1	0	2	0	3	6
Common Shrew	0	1	0	1	1	1	4
Hedgehog	0	0	0	5	2	0	7
Water Shrew	0	0	0	0	0	1	1
Lesser White-toothed Shrew	0	0	0	0	0	1	1
Pygmy Shrew	0	0	0	0	0	1	1
Cormorant	0	0	0	0	2	0	2
Grey Heron	0	1	0	0	0	0	1
Mallard	0	0	1	0	0	0	1
Shoveller	0	0	0	0	1	0	1
Shelduck	0	0	0	0	1	0	1
Sparrowhawk	0	0	0	1	2	2	5
Kestrel	1	0	1	2	2	1	7

	1973	1974	1975	1976	1977	1978	Total
Partridge	0	1	0	0	0	1	2
Water Rail	0	1	1	1	0	1	4
Moorhen	0	0	1	0	0	1	2
Coot	0	0	0	0	0	1	1
Little Grebe	0	0	0	0	0	1	1
Snipe	0	0	0	1	0	0	1
Jack Snipe	0	0	0	1	0	0	1
Green Sandpiper	0	0	0	1	0	0	1
Greater Black-backed Gull	0	0	0	0	2	1	3
Lesser Black-backed Gull	0	0	0	1	0	0	1
Black-headed Gull	0	0	0	0	3	1	4
Razorbill	1	0	0	1	0	1	3
Little Auk	0	0	1	0	0	0	1
Turtle Dove	0	0	2	0	0	0	2
Collared Dove	0	0	0	0	0	1	1
Gannet	0	0	0	0	0	1	1
Cuckoo	0	0	0	1	0	0	1
Barn Owl	0	5	4	4	0	1	14
Tawny Owl	0	1	2	2	1	2	8
Little Owl	0	0	0	0	0	3	3
Long-eared Owl	0	0	0	2	2	0	14
Short-eared Owl	0	0	1	0	0	0	1
Swift	0	0	0	0	2	0	2
Lesser Spotted Woodpecker	0	0	0	0	0	1	1
Kingfisher	0	0	2	3	0	0	5
Hoopoe	0	0	0	0	0	1	1
Wood Pigeon	0	0	0	0	0	3	3
Feral Pigeon	0	0	0	0	0	1	1
Swallow	0	1	1	0	0	1	3
House Martin	0	38*	0	0	0	0	1
Rook	0	0	2	0	2	0	4
Jackdaw	0	0	1	0	0	0	1
Jay	0	0	0	1	0	2	3

	1973	1974	1975	1976	1977	1978	Total
Great Tit	0	0	3	0	0	0	3
Blue Tit	0	0	0	1	0	2	3
Coal Tit	0	0	1	0	2	0	3
Long-tailed Tit	0	0	0	1	0	1	2
Nuthatch	0	0	0	1	0	0	1
Wren	0	0	1	1	0	2	4
Song Thrush	0	0	2	5	5	3	15
Blackbird	0	1	1	2	1	5	10
Redwing	0	0	0	0	0	2	2
Wheatear	0	0	0	0	1	2	3
Stonechat	0	0	0	0	1	0	1
Black Redstart	0	0	0	0	1	0	1
Robin	0	2	2	2	0	2	8
Nightingale	0	0	0	0	0	1	1
Sedge Warbler	0	0	0	1	0	1	2
Blackcap	0	1	0	0	0	0	1
Garden Warbler	0	1	0	0	0	0	1
Lesser Whitethroat	0	0	0	0	1	0	1
Common Whitethroat	0	0	0	0	0	1	1
Willow Warbler	0	1	1	1	1	0	4
Chiffchaff	0	0	3	0	1	0	4
Firecrest	0	0	0	0	0	1	1
Goldcrest	1	2	1	2	0	0	6
Yellow Wagtail	0	0	0	0	0	1	1
Pied Wagtail	0	0	2	35*	0	1	4
Grey Wagtail	0	0	0	0	0	1	1
Great Grey Shrike	0	0	1	0	0	0	1
Starling	0	0	1	2	1	2	6
Greenfinch	0	0	2	1	1	2	6
Chaffinch	0	0	0	0	0	3	3
Goldfinch	0	0	0	2	0	1	3
Siskin	0	0	0	1	0	0	1
Bullfinch	0	3	1	2	1	0	0
Yellowhammer	0	0	1	2	0	0	3

	1973	1974	1975	1976	1977	1978	Total
House Sparrow	0	1	0	1	1	1	4
Treecreeper	0	0	0	1	0	0	1
Totals	10	34	51	74	52	98	319

Number of donations:-

15	Song Thrush
14	Barn Owl, Grey Squirrel
13	Red Fox
10	Blackbird
8	Badger, Robin, Tawny Owl
7	Kestrel, Hedgehog
6	Feral Mink, Mole, Starling, Greenfinch, Goldcrest, Rabbit
5	Weasel, House Mouse, Sparrowhawk, Kingfisher
4	Stoat, Common Shrew, Wren, Willow Warbler, Chiffchaff, Pied Wagtail, House Sparrow, Water Rail, Black-headed Gull, Long-eared Owl, Rook
3	Long-eared Bat, Wood Mouse, Greater Black-backed Gull, Razorbill, Little Owl, Wood Pigeon, Swallow, Jay, Blue Tit, Great Tit, Coal Tit, Wheatear, Chaffinch, Goldfinch, Yellowhammer
2	Pipistrelle, Bank Vole, Cormorant, Partridge, Moorhen, Turtle Dove, Swift, Long-tailed Tit, Redwing, Sedge Warbler
1	Otter, Long-tailed Field Mouse, Brown Rat, Short-tailed Field Vole, Water Shrew, Lesser White-toothed Shrew, Pygmy Shrew, Grey Heron, Mallard, Shoveller, Shelduck, Coot, Little Grebe, Snipe, Jack Snipe, Green Sandpiper, Lesser Black-backed Gull, Little Auk, Collared Dove, Gannet, Cuckoo, Short-eared Owl, Lesser Spotted Woodpecker, Hoopoe, Feral Pigeon, House Martin, Jackdaw, Nuthatch, Stonechat, Black Redstart, Nightingale, Blackcap, Garden Warbler, Lesser Whitethroat, Common Whitethroat, Firecrest, Yellow Wagtail, Grey Wagtail, Great Grey Shrike, Siskin, Treecreeper

In graphs 1-2 I have excluded the figures for 1973 from the averages. This being the first year of operation the system did not begin to function until the latter part of the year and as such cannot be said to reflect that period accurately.

An examination of the graphs shows that they are roughly as follows:- Troughs from late Autumn to mid Winter, and mid Spring to early Summer. Peaks from late Winter to early Spring and mid Summer to mid Autumn. Graph 2 shows that the mortalities, while there is an approximate corrolation during the less pronounced October peak between bird and mammal mortalities.

Mammal mortality is at its highest during October (as far as the Booth Museum's records show). I can only suggest that this might relate to the fact that after the breeding season there are more animals in existence with correspondingly more pressure on territory and consequently more mortality. In the case of birds the most important factor influencing mortality must be migration. The late Winter early Autumn trough can, I am sure, largely be explained by the absence of the majority of birds. It is interesting to note that the number of Winter migrants given to the Booth Museum is so small as to be negligible, one of several factors which might result in the latter could be that the Winter weather deters much outdoor recreational activity. The April peak corresponds to a high mortality amongst returning migrants whose fat/energy supplies were not sufficient to tide them over the lean period prior to the onset of Spring. This also corresponds in some species to the pre-breeding territorial activity or in other species with the inevitable fledgling mortality rate. The mid Spring early Summer trough could suggest a food sufficiency, while the late Summer early Autumn peak could be said to represent amongst other factors the lessening of available foodstuffs.

A detailed analysis of this pattern of peaks and troughs would require the breakdown and discussion of each species represented on the graphs, taking into consideration factors such as the following. Weather conditions; behaviour e.g. migration, territorial conflict, etc., human activity e.g. hunting seasons, seasonal variation in outdoor activities, foodstuff availability, physiological data on the birds themselves, e.g. age, sex, health, toxicity levels, comparative measurements, etc. It is obvious that the size of the sample that the Booth Museum can supply is far too small and the time involved too short to justify this close an analysis, or for that matter to expect any "meaningful" results from any such work. This would not however be the case if the records were not those of one museum, and if other institutions associated with post-mortem zoological materials could also supply records. As these records are in existence, albeit separately, it would seem a "feasible" task to collect this information, perhaps via one of the Biological Records Centres, and thus to have available a suitably large sample on which to be able to base some potentially interesting research.

Jeremy Adams,
Booth Museum of Natural History
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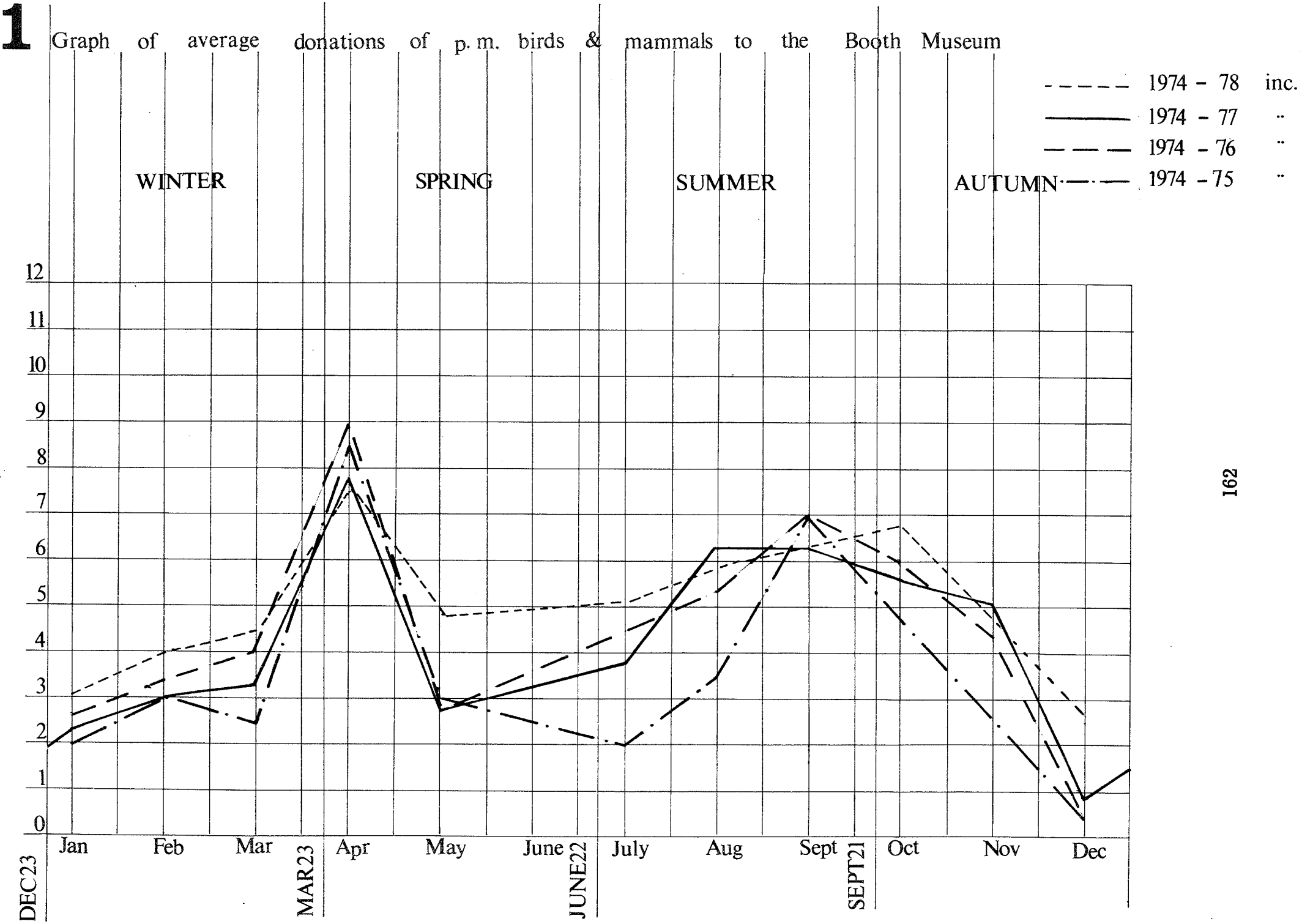
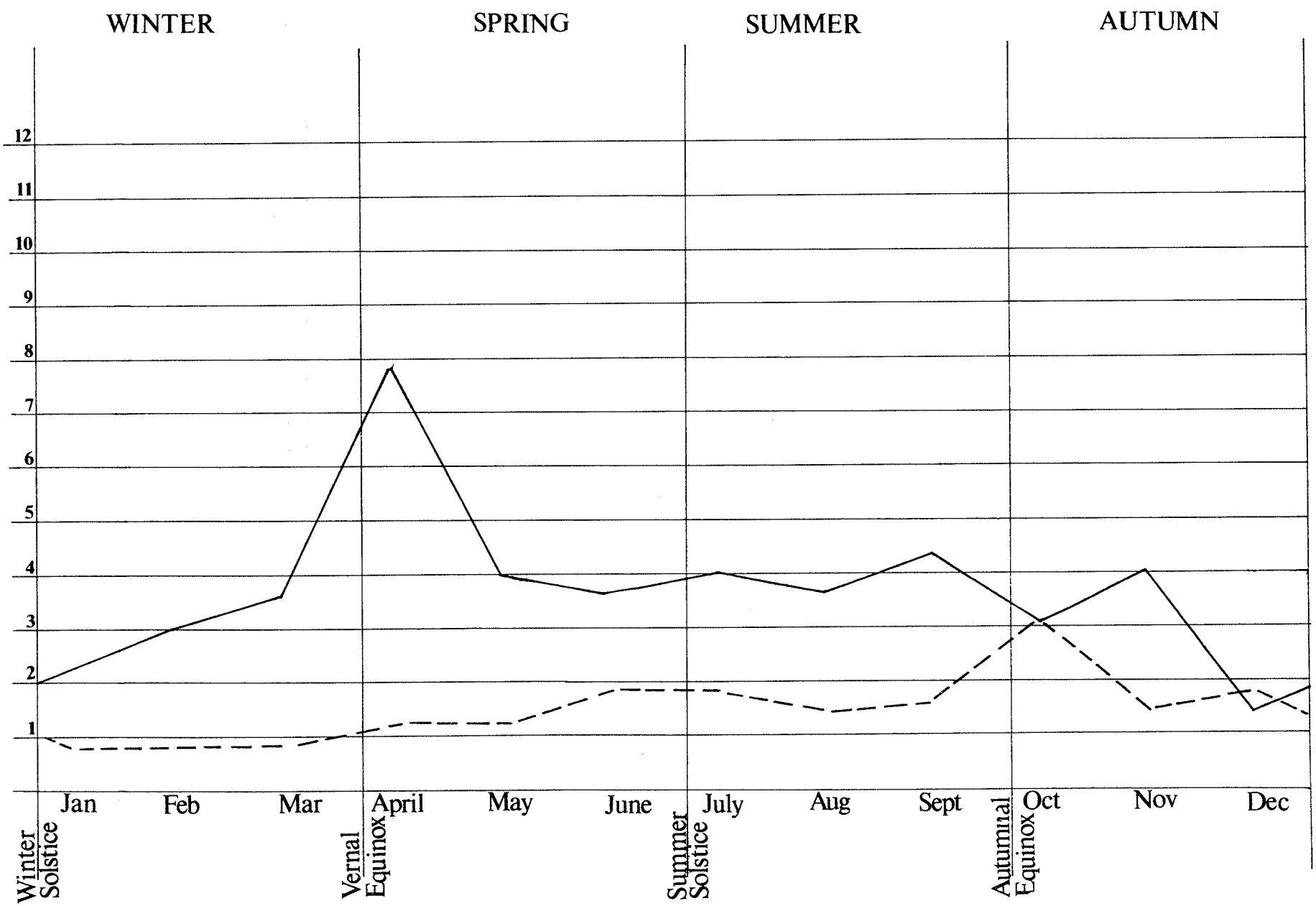
1 Graph of average donations of p.m. birds & mammals to the Booth Museum

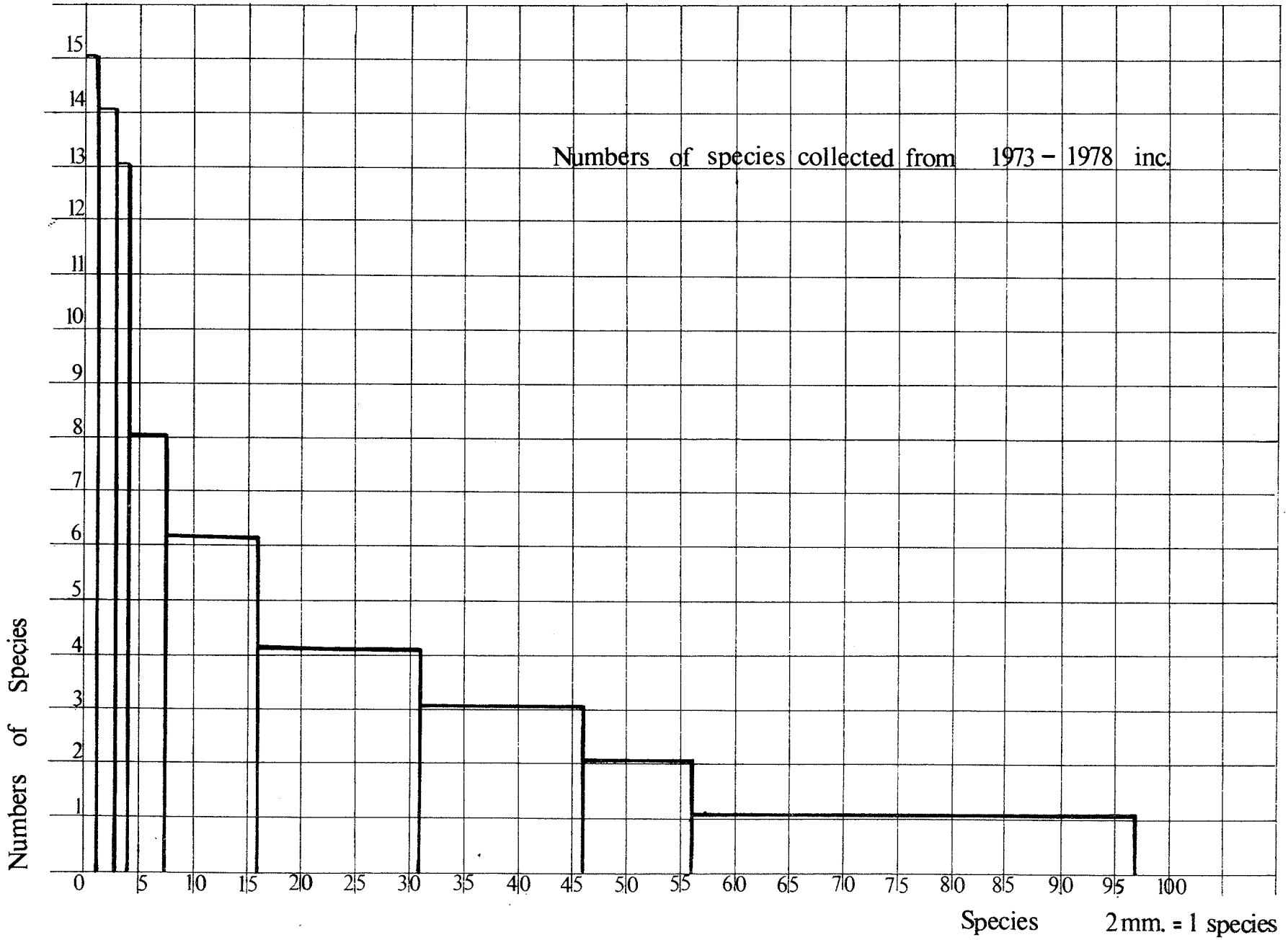


2

Comparison between average monthly donations birds with mammals 1974 - 1978



3


Numbers of species collected from 1973 – 1978 inc.
Numbers of Species
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80
85
90
95
100
Species
2mm. = 1 species