

CAGED TO SELL

**A study of animal related problems found in
Scottish pet shops in the year 2003**



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INTRODUCTION

As a result of the recent devolution process, Scotland is now able to debate, review and ultimately improve previously enacted legislation. This includes legislation and regulation that deals with the relationship between people and non-human animals. Any aspect of this relationship has advocates of two opposite attitudes: to support the unrestricted use of non-human animals for human benefit with little regard to the animals' fate, or to defend and/or protect such animals from the abuse and exploitation that such use can generate. These advocates often take the form of pressure groups, charities or other types of non-governmental organisations (NGO), some of which focus more on vivisection, others on food related issues, and others on entertainment. However, there are not many organisations that mainly focus on the issue of companion animals, broadly referred as 'pets'.

'Advocates for Animals', an Edinburgh based NGO, has decided to address the issue of companion animals in Scotland, in particular from an animal protection point of view. It has commissioned a study, the result of which is this report, aimed at providing a detailed and accurate picture of the 'status quo' of one of the aspects of this subject: pet shops.

The issue of companion animals has several dimensions that can be studied and addressed separately: the pet trade, the keeping of pets, the breeding of companion and ornamental animals, and the actual commercial transaction in which an animal changes hands, which nowadays can take place privately, through flexible commercial structures like specialised groups or the Internet, or through the traditional 'pet shops'. This report will only focus on the latter.

This study was conceived to obtain a representative view of pet shops that could legitimately be applied to the whole of Scotland. In order to achieve this a scientific format based on a large randomly selected sample of pet shops was chosen. Also, the study aimed to look beyond the surface and address problems that may not be immediately apparent. In order to do so a detailed analysis of the regulations governing Scottish pet shops was made, but most importantly, an investigatory approach seeking to avoid misinformation and bias was taken.

Despite the fact that this study has been commissioned by an animal protection organisation, it has been designed, developed and executed by an independent investigator/researcher that works as a freelance animal welfare consultant. Therefore, this report should be considered as having an independent status. However, this is not a study aimed to merely describe, in the most neutral way possible, all aspects of Scottish pet shops, but to focus on those that may constitute a problem, that may need improving, or that are relevant in a debate where the welfare of the animals is discussed. In other words, this study has focused on the animals in pet shops and their problems, more than on commercial, sociological or otherwise human aspects of the industry.

Therefore, the reader should not expect to find information that directly supports the maintenance of the 'status quo' if information that supports otherwise was found, because the ultimate goal of this investigation is to provide facts and incentive for improvement in whatever area this can be achieved. This, however, does not invalidate any conclusion drawn, nor allows labelling this report as biased or subjective. A considerable effort has been made to produce the most objective report possible, and to allow replication, cross-reference and critical review.

It is hoped that this study will contribute positively to the debate on the relationship between humans and companion animals, offering new and fresh data, facts and conclusions that may prove helpful in any future improvement of such relationship.

METHODS AND SUBJECT DESCRIPTION

This study used two main methodological approaches: scientific research and investigative journalism. The first one was based on developing general descriptive statistical analysis from data obtained through random sampling. The second one was based on undercover visits to pet shops posing as prospective customer in order to get information difficult to obtain if the pet shops were aware of being investigated. Both approaches were executed within the law and driven by criteria of objectivity and public interest.

A single person, author of this report, developed the entirety of this study, sometimes acting as the ‘investigator’, browsing in the shop or asking questions to the shop assistants, and sometimes as a researcher, when analysing the data obtained from the shops visits and drawing conclusions based on his scientific and animal welfare expertise. In order to minimise any possible subjectivity and to allow second opinion, all the visits to the pet shops were recorded with a covert video camera, and most of the analysis took place from information obtained by viewing the recorded tapes.

Definition

The first step to take in an investigation of this sort is to decide which pet shops will be visited. In order to do so a definition of pet shop is needed. The following official definition in the ‘interpretation’ chapter of the Pet Animals Act 1951 was used:

(1) References in this Act to the keeping of a pet shop shall, subject to the following provisions of this section, be construed as references to the carrying on at premises of any nature (including a private dwelling) of a business of selling animals as pets, and as including references to the keeping of animals in any such premises as aforesaid with a view to their being sold in the course of such a business, whether by the keeper thereof or by any other person:

Provided that-

(a) a person shall not be deemed to keep a pet shop by reason only of his keeping or selling pedigree animals bred by him, or the offspring of an animal kept by him as a pet;
(b) where a person carries on a business of selling animals as pets in conjunction with a business of breeding pedigree animals, and the local authority are satisfied that the animals so sold by him (in so far as they are not pedigree animals bred by him) are animals which were acquired by him with a view to being used, if suitable, for breeding or show purposes but have subsequently been found by him not to be suitable or required for such use, the local authority may if they think fit direct that the said person shall not be deemed to keep a pet shop by reason only of his carrying on the first-mentioned business.

(2) References in this Act to the selling or keeping of animals as pets shall be construed in accordance with the following provisions, that is to say-

(a) as respects cats and dogs, such references shall be construed as including references to selling or keeping, as the case may be, wholly or mainly for domestic purposes; and
(b) as respects any animal, such references shall be construed as including references to selling or keeping, as the case may be, for ornamental purposes.

(3) In this Act, unless the context otherwise requires, the following expressions have the meanings hereby respectively assigned to them, that is to say:-

"animal" includes any description of vertebrate;
"local authority" means the council of any . . . county district, the council of a . . . borough or the Common Council of the City of London and in Scotland means [a council constituted under section 2 of the Local Government etc (Scotland) Act 1994];
"pedigree animal" means an animal of any description which is by its breeding eligible for registration with a recognised club or society keeping a register of animals of that description;
"veterinary surgeon" means a person who is for the time being registered in the Register of Veterinary Surgeons; "veterinary practitioner" means a person who is for the time being registered in the Supplementary Veterinary Register

Therefore, anything that the Scottish legislation interprets as a pet shop – including traditional pet shops, aquarium centres and garden centres that sell live vertebrates as companion or ornamental animals – was considered as a ‘pet shop’ in this study.

Excluded from the study were pet shops that do not sell live vertebrates, shops that sell only invertebrates, establishments that only sell animals for purposes other than companionship or ornament, pet shops that keep live animals but do not sell any, and individuals that trade with live animals but do not do it from a specific establishment in Scotland.

In this report the term 'animal' is used to mean any member of the Animal Kingdom (except humans), including birds, reptiles and fish.

Sampling and shop visits

Having defined 'pet shops' the next step was to find out how many there were in Scotland, so an appropriate sample size could be chosen. Unfortunately there is not a centralised body that gathers information about pet shops, and therefore an official list of Scottish pet shops does not exist. The closest source for such list is the 'Yellow Pages'.

The list of Scottish pet shops was created by extracting all entries under the section 'pet shops' of all the volumes of the most current Yellow Pages issue (at the time the 2002-2003 Yellow Pages published in June 2002) that cover the whole of Scotland. Some processing was needed because some pet shops advertise in different Yellow Pages volumes, so all repetitions and non-Scottish entries were filtered out.

Although some shops could have closed or new shops opened between the time of the Yellow Pages publication and the beginning of the study (almost a year) no more accurate list could be obtained. Also, it is possible that some shops that do not sell live animals but just pet supplies would advertise under the chapter 'pet shops', despite the existence of other more relevant chapters in the Yellow Pages. The only way to detect these cases would be by visiting the shops and asking about what they sell. Therefore, it was initially assumed that all shops under the 'pet shops' section sold live animals, so a sample of them could be selected for visiting. Afterwards, when the actual visits detected these cases, the sample was continuously re-adjusted and substitutions were found.

After making the appropriate filtering, the Yellow Pages list produced 262 entries. This number was considered as the 'population size'; the random sample was based on those entries. However, while travelling Scotland visiting shops a new pet shop not present in Yellow Pages was found (possibly opened after the time of publication), so the population size was adjusted to 263.

We estimated that in order to have a representative enough sample we should visit 75 shops, which represented 29% of the list. A computer generated random sample of 75 entries was created from an alphabetically ordered population list. However, while visiting the shops we found that 17 out of the 75 (23%) were either closed or did not sell pets (only pet supplies), so in fact the population of Pet Shops that sell pets is **203** (23% of 263), and therefore our 75 shops sample represents **37%** of the Pet shops that sell animals (because the 17 selected that did not sell pets were substituted by the closest shops geographically that did, which maintained both the sample size and the randomness).

However, during the investigation it was later discovered that some Garden Centres sell animals but do not advertise themselves in the Yellow Pages under the 'pet shops' section. These are mainly centres that only sell pond fish, so they do not consider appropriate to define themselves as pet shops, although the definition used in this study still apply to them and therefore they could not be excluded from the study. Telephone calls to 287 Scottish Garden centres found in a list on the Internet (www.treasuresofbritain.org/gardencentres.htm) were made, so it was possible to determine whether or not they sold live vertebrates. From the 287 possible Garden Centres 200 were confirmed as still open, and 36 of these (18%) were confirmed to sell animals of some sort (mainly fish). Because the Yellow Pages only had entries for six Garden Centres of the Garden Centres list, and there are 30 Garden Centres more that would require a pet shop licence, a new random sample of 12 Garden Centres from the list of 36 (which represents 33%) was drawn.

Therefore, in total a sample of 75 pet shops from the Yellow Pages and 12 Garden Centres from the mentioned webpage were visited, which adds **87** establishments visited from a total of **233** – which still represents 37% of the population of sites that would require a Pet Animals licence.

Other visits to other shops besides the 87 selected were also made; in particular all shops advertised in the Yellow Pages that indicated in their adverts that they sell exotic animals (see definitions below), and that had not been selected otherwise. These shops were called 'extra exotics', and six of them were visited. Two other shops that had not been selected were also visited. These were cases reported to have particular circumstances that made them good candidates to illustrate problems that the random selection might not have detected (because of their rarity). So, in total eight 'extra' shops were visited, which added to the 87 sums **95** shops (representing **41%** of the

sites that would require a Pet Animals licence). It is important to say, though, that the information obtained from the 'extra' shops was not included in any analysis based in the random sampling.

Because in the process of visiting selected shops 20 that needed substitution (17 selected plus 3 substitutions that needed substitution themselves) were found, and 12 of those had to be substituted because it was discovered during the visit that they do not sell live animals, the total number of establishments visited during this investigation from which a video tape record exist is **107**.

All establishments were visited between 18/6/03 and 14/8/03.

Three shops were visited twice. Two because the recording equipment failed, so no record on tape was possible during the first visit; the third was a follow up to a shop that announced a future event with live animals, and the shop was re-visited for this event.

The average visit time was 20 minutes and 30 seconds (n=75, STD = 8.56 minutes), the maximum time was 40 minutes 59 seconds, and the minimum time was 5 minutes. The total number of recorded hours from all the visits to all the selected shops was 25.

The list of all shops visited (and their substitutions when needed), their location and date of visit can be seen in tables 1 to 3.

PET SHOPS VISITED						
Rand.num	Code	Date	Outcome	Substitution	Town	County
0.244592	A&H064	18/06/03	Successful		Edinburgh	Midlothian
0.158052	ACO041	23/07/03	Successful		Kinross	Fife
0.253252	ACO066	26/07/03	Successful		Galashiels	Scottish Borders
	ACO067	18/06/03	Successful		Musselburgh	Midlothian
0.259261	ACO068	22/07/03	Successful		Leven	Fife
0.261938	ACO069	14/07/03	Successful		Edinburgh	Midlothian
0.265516	ACO070	19/06/03	Successful		Edinburgh	Midlothian
0.287758	ACO075	22/07/03	Successful		Cowdenbeath	Fife
0.489623	ACO128	18/07/03	Successful		Falkirk	Stirlingshire
0.648209	ACO170	30/07/03	Successful		Ayr	Ayrshire
0.654883	ACO172	31/07/03	Successful		Saltcoats	Ayrshire
0.66685	ACO175	02/08/03	Successful		Kilmarnock	Ayrshire
0.89682	ACO235	23/06/03	Successful		Inverness	Highlands
	AIR176	04/07/03	Successful		Airdrie	Lanarkshire
0.297898	ALL078	26/07/03	Successful		Kelso	Roxburghshire
0.172254	ALY045	21/06/03	No animals	KIR055	Alyth	Perthshire
0.011005	ANI003	27/06/03	Successful		Aberdeen	Aberdeenshire
0.015151	ANI004	24/06/03	No animals	JUN015	Buckie	Aberdeenshire
0.307838	AQU081	10/07/03	Successful		Edinburgh	Midlothian
0.507364	BER133	01/07/03	Closed	HAY144	Glasgow	Lanarkshire
0.026472	BIR007	24/06/03	Successful		Elgin	Aberdeenshire
	BUG008	27/06/03	Successful		Aberdeen	Aberdeenshire
0.524185	COR137	05/07/03	Successful		Glasgow	Lanarkshire
0.691447	COR181	01/08/03	No animals	GIR189	Girvan	Ayrshire
0.696268	COU182	09/07/03	Successful		Barrhead	Lanarkshire
	CRE184	16/07/03	Successful		Clarkston	Renfrewshire
	CRE263	07/07/03	Successful		Oban	Highlands
0.709478	DAP186	02/07/03	Successful		Hamilton	Lanarkshire
0.712617	DIS187	16/07/03	No Animals	CRE184	Glasgow	Lanarkshire
0.52695	DOB138	09/07/03	Successful		Cumbernauld	Lanarkshire
0.186337	DOG049	21/06/03	Successful		Dundee	Angus
0.191821	DOG050	23/07/03	No animals	LYD095	Kinross	Fife

0.045399	FIS012	27/06/03	Successful		Aberdeen	Aberdeenshire
0.192854	FOR051	21/06/03	Successful		Forfar	Angus
	GIR 189	01/08/03	Successful		Girvan	Ayshire
	HAY114	04/07/03	repeated		Glasgow	Lanarkshire
	HAY144	01/07/03	Tape not recorded		Glasgow	Lanarkshire
	HIG239	25/06/03	Successful		Carrbridge	Highlands
0.553381	J&M145	16/07/03	Successful		Glasgow	Lanarkshire
0.97002	JAN254	28/07/03	No animals	PAW256	Moffat	Dumfriesshire
	JUN015	26/06/03	Successful		Turriff	Aberdeenshire
0.916909	KAN240	07/07/03	No animals	CRE263	Oban	Highlands
	KIN092	23/07/03	Successful		Lochgelly	Fife
	KIR055	21/06/03	Successful		Kirriemuir	Angus
0.355669	LIB093	25/07/03	Successful		Hawick	Scottish Borders
	LYD095	23/07/03	Closed	KIN092	Lochgelly	Fife
0.742654	M&R195	05/07/03	Successful		Glasgow	Lanarkshire
0.06445	MAR017	27/06/03	No animals	BUG008	Aberdeen	Aberdeenshire
0.06749	MAR018	28/06/03	Successful		Aberdeen	Aberdeenshire
0.367685	MOR096	19/06/03	Successful		Edinburgh	Midlothian
0.370237	MUS097	18/06/03	Closed	ACO067	Musselburgh	Midlothian
0.346941	NOA091	14/07/03	Successful		Edinburgh	Midlothian
0.760647	NOA199	01/08/03	Successful		Kilbirnie	Ayrshire
0.375292	NOR098	04/08/03	Successful		North Berwick	East Lothian
0.074774	PAL020	24/06/03	Successful		Cullen	Aberdeenshire
0.930649	PAL244	24/06/03	Successful		Forres	Morayshire
0.772844	PAM202	31/07/03	Closed	PRE224	Saltcoats	Ayrshire
	PRE224	31/07/03	No animals	PRE225	Irvine	Ayrshire
0.378759	PAW099	25/07/03	Successful		Jedburgh	Roxburghshire
0.380283	PAW100	22/07/03	Successful		Leven	Fife
	PAW256	28/07/03	No animals	PET260	Lockerbie	Dumfries & Galloway
0.233535	PET061	20/06/03	Successful		Arbroath	Angus
0.388687	PET102	18/07/03	Successful		Bo'Ness	West Lothian
0.395071	PET104	30/06/03	Not found	PET114	Livingstone	Midlothian
0.413773	PET108	30/06/03	Closed	WHI125	Bathgate	West Lothian
0.421055	PET110	18/06/03	Successful		Edinburgh	Midlothian
0.423384	PET111	10/07/03	Successful		Edinburgh	Midlothian
	PET111	20/07/03	Follow up		Edinburgh	Midlothian
0.428937	PET112	19/06/03	Successful		Edinburgh	Midlothian
0.430585	PET113	15/07/03	Successful		Straiton	Midlothian
	PET114	30/06/03	Successful		Livingston	West Lothian
0.439902	PET115	22/07/03	Successful		Anstruther	Fife
0.443578	PET116	15/07/03	Successful		Edinburgh	Midlothian
0.6026	PET158	19/07/03	Closed	PET162	Alloa	Clackmannanshire
0.595787	PET156	16/07/03	Successful		Drumchapel	Lanarkshire
	PET162	19/07/03	Successful		Alloa	Clackmannanshire
0.780989	PET205	17/07/03	Successful		Renfrew	Lanarkshire
	PET207	30/07/03	Successful		Prestwick	Ayrshire
0.793102	PET208	30/07/03	Successful		Ayr	Ayrshire
0.797607	PET209	04/07/03	Successful		Airdrie	Lanarkshire
0.803089	PET210	02/07/03	Successful		Wishaw	Lanarkshire
0.803896	PET211	17/07/03	Successful		Johnstone	Renfrewshire
0.8092	PET212	02/07/11	Successful		Hamilton	Lanarkshire
0.812558	PET213	02/07/03	Successful		Hamilton	Lanarkshire
0.824807	PET216	03/07/03	Successful		Lanark	Lanarkshire
0.833568	PET218	05/07/03	Successful		Greenock	Renfrewshire

0.937915	PET246	23/06/03	No animals	HIG239	Grantown on Spey	Morayshire
0.94511	PET248	23/06/03	Successful		Inverness	Highlands
	PET260	28/07/03	Successful		Dumfries	Dumfries & Galloway
	PRE225	31/07/03	Successful		Irvine	Ayrshire
0.862756	PRE226	31/07/03	Successful		Kilwinning	Ayrshire
0.877639	SMA230	09/07/03	Successful		Glasgow	Lanarkshire
0.882539	STI231	04/07/03	Closed	AIR176	Airdrie	Lanarkshire
0.886029	TOW232	30/07/03	No animals	PET207	Prestwick	Ayrshire
0.137876	WAT036	28/06/03	Successful		Aberdeen	Aberdeenshire
	WHI125	30/06/03	Successful		Whitburn	West Lothian
0.144781	WOO018	28/06/03	Successful		Aberdeen	Aberdeenshire

Table 1. List of all 75 randomly selected pet shops from the 'Yellow Pages' that were visited during this investigation. The first column shows the computer generated random number used to select each shop, and the fifth column show the code of the shop that was visited as a substitution when the respective shop of the second column turned out to be either closed or not selling pets (outcome that can be seen in the fourth column). The third and last two columns show the date of visit and location respectively of the initially successful cases (in bold) or the substituted shops. To protect the identity of the shops investigated only code numbers have been used in this report, but a list with the names associated to the codes may be provided on request to official sources. The letters in the code number are not necessarily related to the shop's name, hence no conclusion should be drawn from the code number in respect which actual shop it represents.

GARDEN CENTRES VISITED				
<u>rand.num</u>	<u>code</u>	<u>Date</u>	<u>Town</u>	<u>county</u>
0.7925968	CAR029-G	12/08/03	Gourock	Renfrewshire
0.3407632	CUP012-G	08/08/03	Cupar	Fife
0.1098235	DOB004-G	08/08/03	Dundee	Angus
0.2413119	DOB009-G	09/07/03	Cumbernauld	Dunbartonshire
0.2772661	DOB010-G	12/08/03	Helensburgh	Dunbartonshire
0.3048466	EAS011-G	10/08/03	Crail	Fife
0.8388385	FIN030-G	13/08/03	Paisley	Renfrewshire
0.1351318	FRA005-G	13/08/03	Kilmarnock	Ayrshire
0.2323107	HEA008-G	28/07/03	Dumfries	Dumfries & Galloway
0.4443608	HOW016-G	06/08/03	Inverness	Inverness-shire
0.6509693	KLO023-G	15/07/03	Edinburgh	Midlothian
0.7881093	THE028-G	07/08/03	Pitlochry	Perthshire

Table 2. List of all 12 randomly selected Garden Centres from an Internet web page (see text) that were visited during this investigation. The first column shows the computer generated random number used to select each centre. The last three columns show the date of visit and location of the centres. In bold are garden centres that turned out to be also randomly selected from the 'Yellow Pages' list. To protect the identity of the shops investigated only code numbers have been used in this report, but a list with the names associated to the codes may be provided on request to official sources. The letters in the code number are not necessarily related to the shop name, hence no conclusion should be drawn from the code number in respect which actual shop it represents.

'EXTRA' PET SHOPS VISITED			
<u>Code</u>	<u>Date</u>	<u>town</u>	<u>county</u>
BAR132	13/08/03	Glasgow	Lanarkshire
DAL087	14/08/03	Edinburgh	Dalkeith
FER139	11/08/03	Glasgow	Lanarkshire
HAR143	11/08/03	Clydebank	Lanarkshire
NEO198	13/08/03	Glasgow	Lanarkshire
PET247	06/08/03	Kirkwall	Okney
RDR121	09/08/03	Bathgate	Midlothian
THE122	09/08/03	Edinburgh	Midlothian

Table 3. List of 8 'extra' pet shops that were visited during this investigation besides the randomly selected ones, with the date of visit and location of the centres. To protect the identity of the shops investigated only code numbers have been used in this report, but a list with the names associated to the codes may be provided on request to official sources. The letters in the code number are not necessarily related to the shop name, hence no conclusion should be drawn from the code number in respect which actual shop it represents.

Types of establishments

Not all the establishments that would need a Pet Animals licence are the same type of shop. For example, the activities and problems that can occur in a pet shop that only sells pond fish may be quite different than the ones in a shop specialising in parrots. Therefore, it would be appropriate to subdivide the pet shops in categories with similar characteristics. In doing so it was possible to have more accurate conclusions relative to particular activities more associated to particular types of shop, and certain comparisons across the different types could also be made.

Using criteria such as the type of animal kept and the shop size the following seven mutually exclusive categories were created:

Big Chain (BCH) = Pet shop not being (or being part of) a Garden Centre, belonging to a chain of stores with more than 5 branches in Scotland, with an average size branch bigger than the average high street shop, and normally located in retail parks or large shopping centres.

Small Chain (SCH) = Pet shop not being (or being part of) a Garden Centre, and belonging to a chain of stores with more than 5 branches in Scotland, in which the average size branch is not bigger than the average high street shop.

Aquaria (A) = Pet shop not being (or being part of) a Garden Centre, not belonging to a chain of stores with more than 5 branches in Scotland, and mainly based in the business of selling aquatic vertebrates and their accessories.

Minimal (M) = Pet shop not being (or being part of) a Garden Centre, not belonging to a chain of stores with more than 5 branches in Scotland, not based in the business of selling mainly aquatic vertebrates and their accessories, and selling between one and two different types of live non-exotic vertebrates (namely fish, birds or mammals).

Exotics (EX) = Pet shop not being (or being part of) a Garden Centre, not belonging to a chain of stores with more than 5 branches in Scotland, not based in the business of selling mainly aquatic vertebrates and their accessories, and mainly based in the business of selling live exotic wild vertebrates other than fish (namely amphibians, reptiles, and/or exotic birds).

General (G) = Pet shop not being (or being part of) a Garden Centre, not belonging to a chain of stores with more than 5 branches in Scotland, not based in the business of selling mainly aquatic vertebrates and their accessories, and selling more than two different types of live vertebrates (namely fish, amphibians, reptiles, birds or mammals), most of them not being exotic.

Garden Centre (GC) = commercial establishment mainly based in the selling of garden plants and accessories, or pet shop that is an integrated part of such establishment.

The term 'exotic' was used as synonymous of 'not native of the British Isles and not normally domesticated in the UK', in reference to the term 'wild animal' as interpreted by the DEFRA and the Scottish Executive in the context of the Zoo Licensing Act 1981 (Anonymous, 1999). For the purpose of these definitions only, zebra finches and cockatiels were not considered exotic.

As can be seen in figure 1 the majority of the pet shops in Scotland are independent 'general' shops that sell a variety of types of animals. 'Garden Centres' and shops belonging to a 'Small chain' have as many representatives as about half the number of 'general' shops, and the rest are more or less equally represented with less than a third of the number of 'general' shops. It is important to note that shops specialising in 'exotics' are a minority, only representing 7% of the total (n=86), although this does not mean that exotic animals are not sold in the other shops.

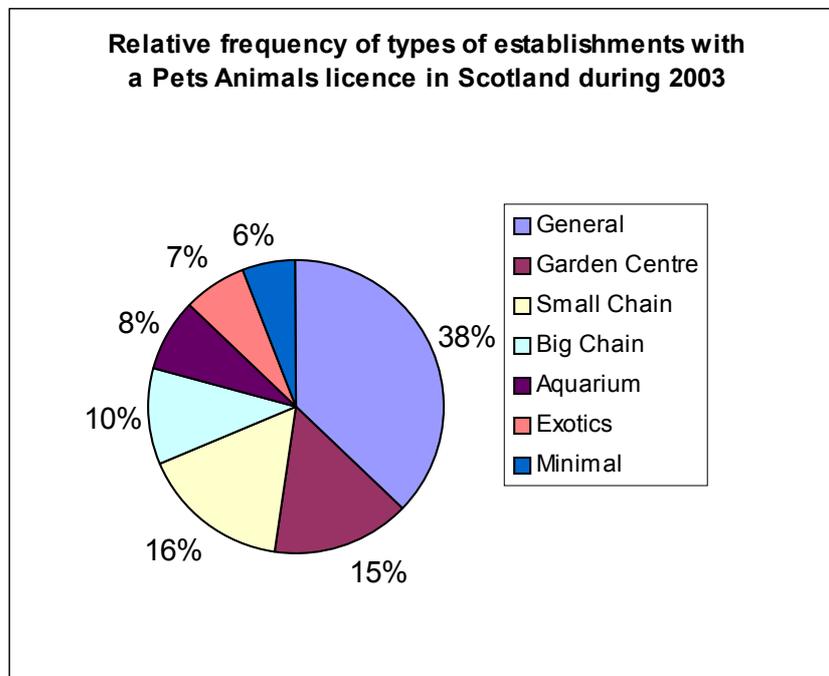


Figure 1. Relative frequency of types of establishments that should have a Pets Animals licence in Scotland during summer 2003. The total number from which the percentage was taken is 86, 75 selected from Yellow Pages plus 11. This last value was calculated by adding the number of Garden Centres that would have been selected if all the 36 Garden Centres that sell animals had been added to the Yellow Pages list from the beginning and a random sample of 37% would have been drawn; the fact that the 75 selected entries include two Garden centres was considered in these calculations.

Having defined each type of pet shop we could then study more in detail the differences between them. Figure 2 shows that the average number of animals per type of shop varies considerably. Although some of the categories could be interpreted as being defined containing small number of animals (like the 'minimal' category) in fact the definitions only refer to types, not to individuals, so a shop with a few types could in fact have many individuals of those types. The high number seen in 'Big chain' can be explained by the fact that a bigger establishment can keep more animals, but the highest value of all goes to 'exotics' shops, with three times more animals than 'general' or 'small chain' shops. This result, because it is not related to shop size, indicates that an intrinsic characteristic of a shop specialising in exotic animals is to keep many individuals. 'Aquaria' feature having relatively few individual animals because in these calculations aquatic animals have not been considered.

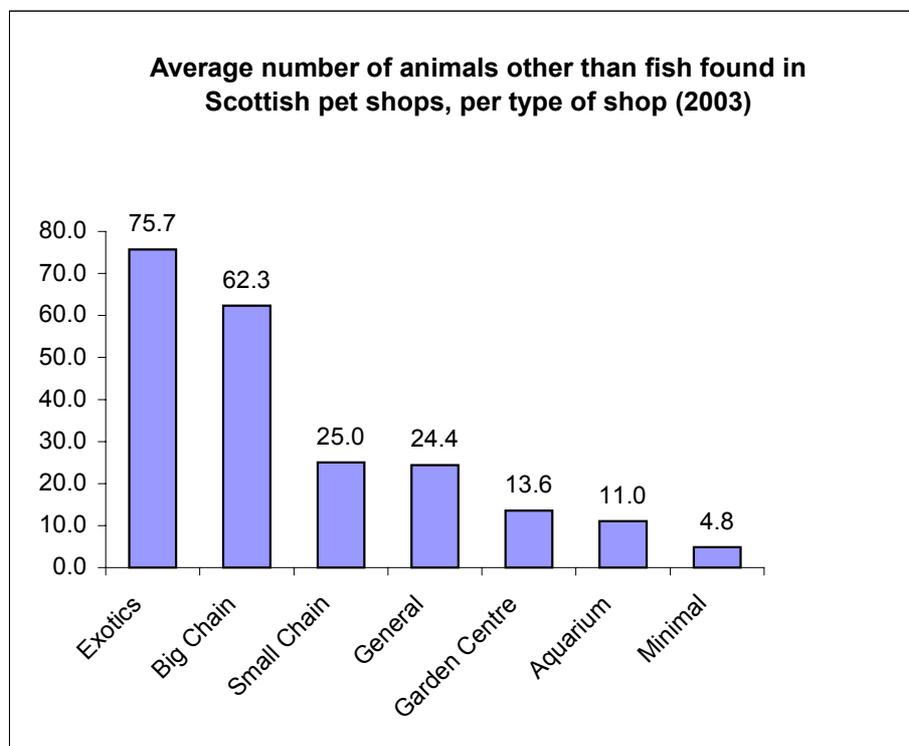


Figure 2. Average number of animals other than fish found during summer 2003 in Scottish pet shops, per type of shop. The values have been based in individuals seen by the investigator, and do not take into account neither fish nor animals kept in non-public areas of the shops. The number of shops of each type from which the averages have been calculated can be taken from figure 1.

If we analyse more in detail which types of animals each of the categories of shops keep, we can see that there is a considerable variation, this time very linked to the definitions of the categories. Figures 3 to 12 express this variability in relative terms of number of individuals per type of animal in each shop category. We can see that they differ not only on the types of most common animals found, but also in the most common exotic animals found.

It is not surprising that 'aquaria' (figure 3) have as a most common animal other than fish another aquatic vertebrate (newts), or that 'minimal' (figure 6) have budgies (budgerigars) and finches as the most common types. However, whilst budgies seem to be the most common animal in 'general' (figure 7), 'exotics' (figure 9), and 'garden centres' (figure 12), with rabbits or hamsters in second place, finches seem to dominate over budgies in 'big chain' shops (figure 4) and hamsters dominate over budgies in 'small chain' ones (figure 10). These differences, though, are quite minimal, so it can be said that budgies, hamsters, finches and rabbits dominate most types of shops. If we exclude them by only focusing on exotic animals, then, expectedly, the differences are a bit clearer. Cockatiels dominate in 'big chain' (figure 5) and 'small chain' (figure 11) shops, while chinchillas do in the 'general' type (figure 8), which is quite surprising. Parakeets are more common in 'big chain' shops than in the others (possibly due to more available space), while gerbils are in the 'small chain' ones.

Generally speaking, then, if we exclude fish (which dominate all types) birds tend to dominate in 'big chain', 'minimal' and 'exotics' shops, while mammals tend to dominate on 'small chain' and 'general' shops.

Regarding exotic animals, apart from the obvious case of 'exotics' shops, the next shop type keeping the highest percentage of exotic animals is 'small chain' (29%, n=303), followed by 'big chain' (20%, n=542) and 'general' (13%, n=775).

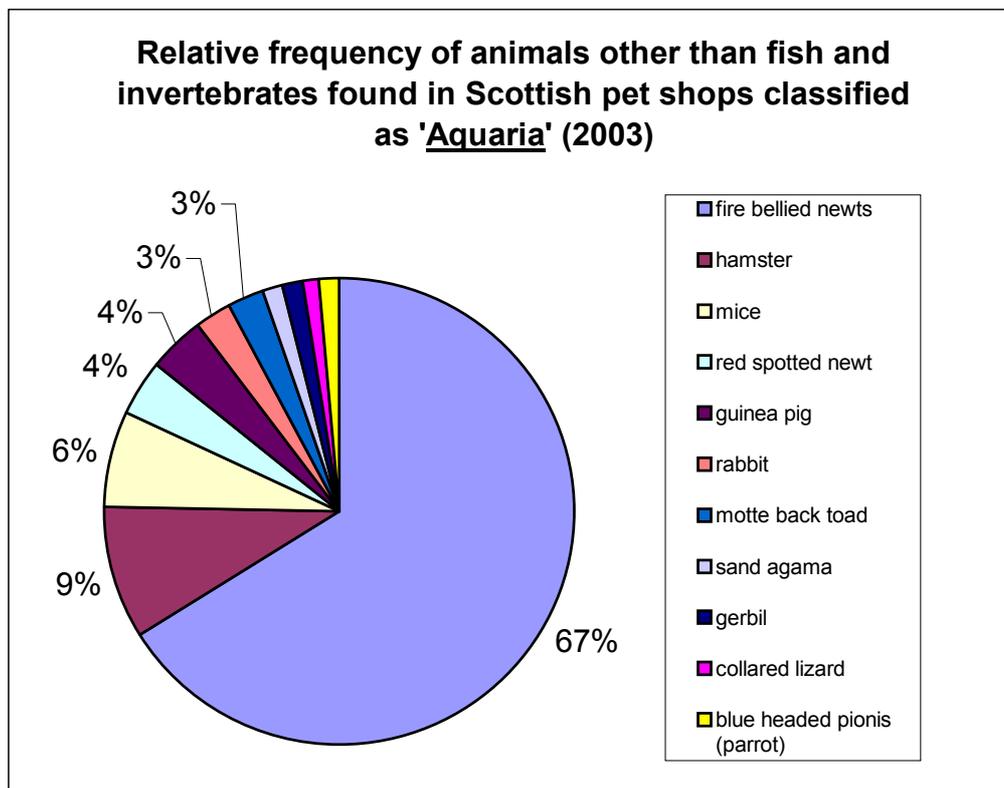


Figure 3. Relative frequency of animals other than fish and invertebrates found in Scottish pet shops classified as 'Aquaria' during 2003 (n=77). The values have been based in individuals seen by the investigator, and do not take into account neither fish nor animals kept in non-public areas of the shops.

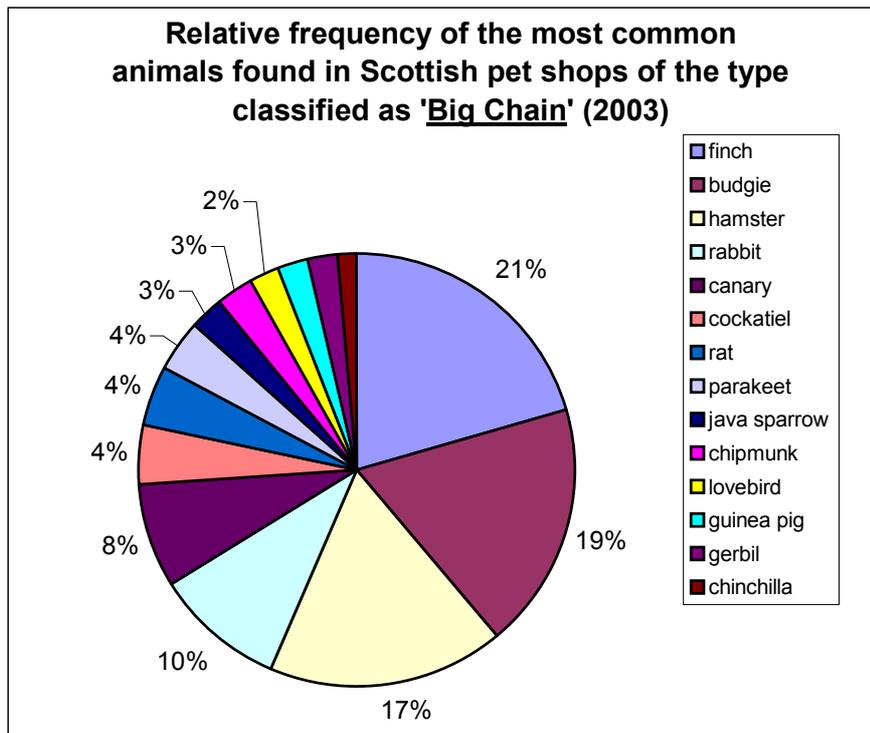


Figure 4. Relative frequency of most common animals other than fish and invertebrates found in Scottish pet shops classified as 'Big chain' during 2003 (n=542). The values have been based in individuals seen by the investigator, and do not take into account neither fish nor animals kept in non-public areas of the shops. Other animals with lower frequency than 1% have not been included.

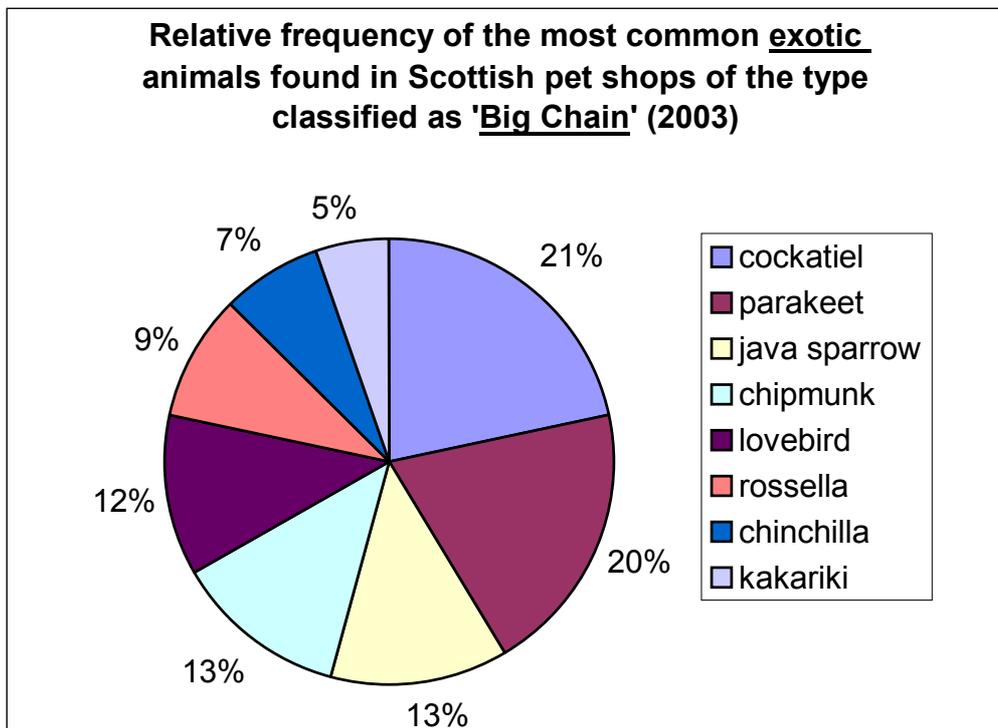


Figure 5. Relative frequency of the most common exotic animals other than fish and invertebrates found in Scottish pet shops classified as 'Big chain' during 2003 (n=111). The values have been based in individuals seen by the investigator, and do not take into account neither fish nor animals kept in non-public areas of the shops. Other animals with lower frequency than 1% have not been included.

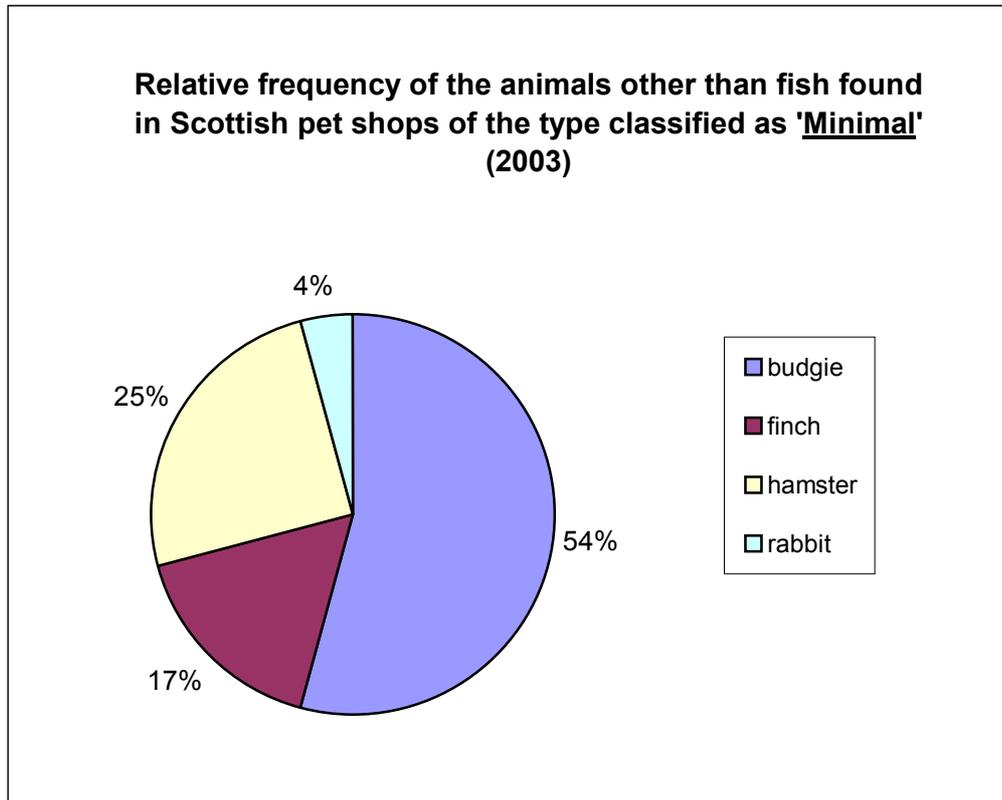


Figure 6. Relative frequency of the most common animals other than fish and invertebrates found in Scottish pet shops classified as 'Minimal' during 2003 (n=24). The values have been based in individuals seen by the investigator, and do not take into account neither fish nor animals kept in non-public areas of the shops. Other animals with lower frequency than 1% have not been included.

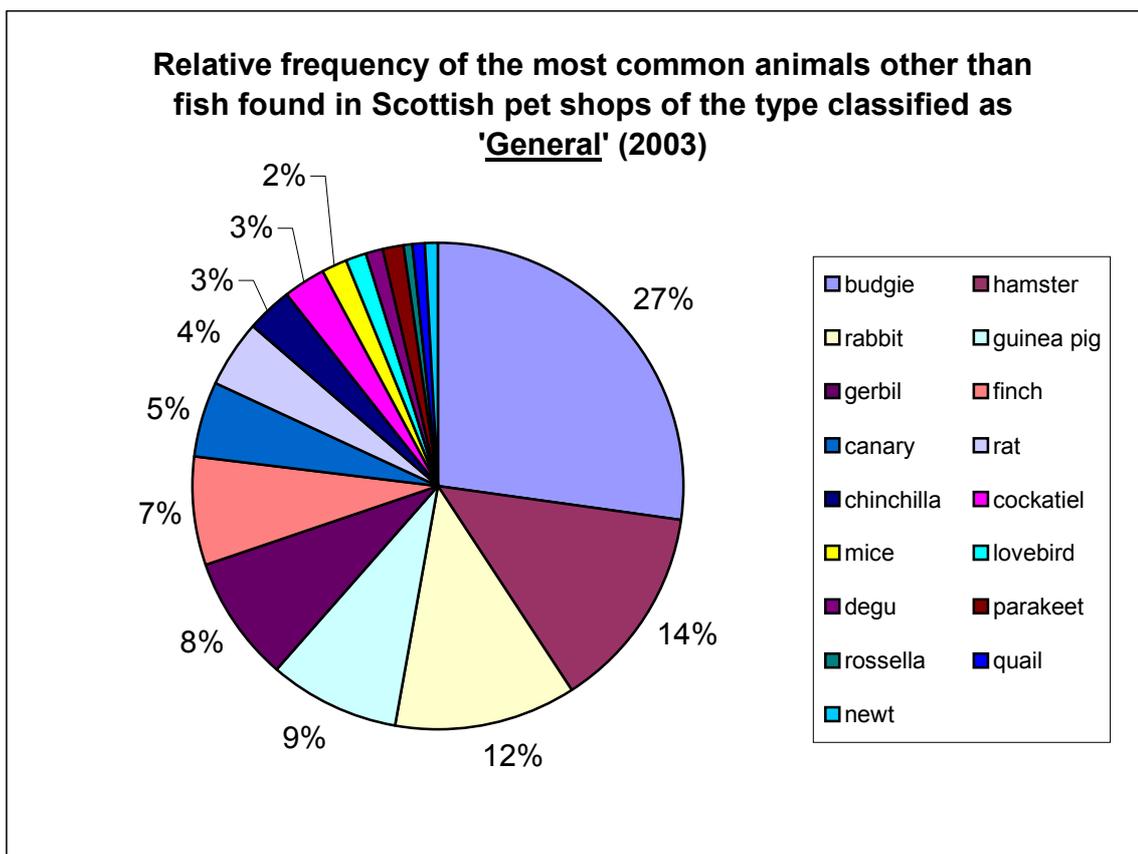


Figure 7. Relative frequency of the most common animals other than fish and invertebrates found in Scottish pet shops classified as 'General' during 2003 (n=775). The values have been based in individuals seen by the investigator, and do not take into account neither fish nor animals kept in non-public areas of the shops. Other animals with lower frequency than 1% have not been included.

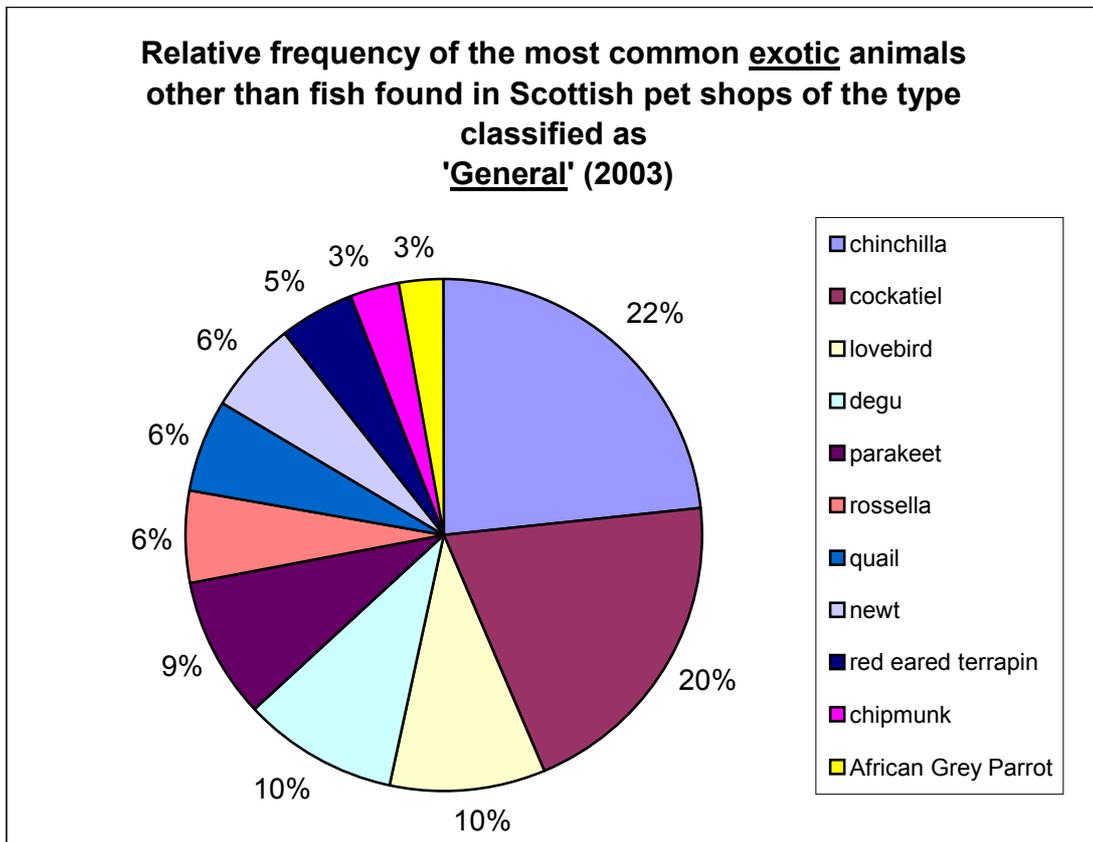


Figure 8. Relative frequency of the most common exotic animals other than fish found in Scottish pet shops classified as 'General' during 2003 (n=103). The values have been based in individuals seen by the investigator, and do not take into account neither fish nor animals kept in non-public areas of the shops. Other animals with lower frequency than 1% have not been included.

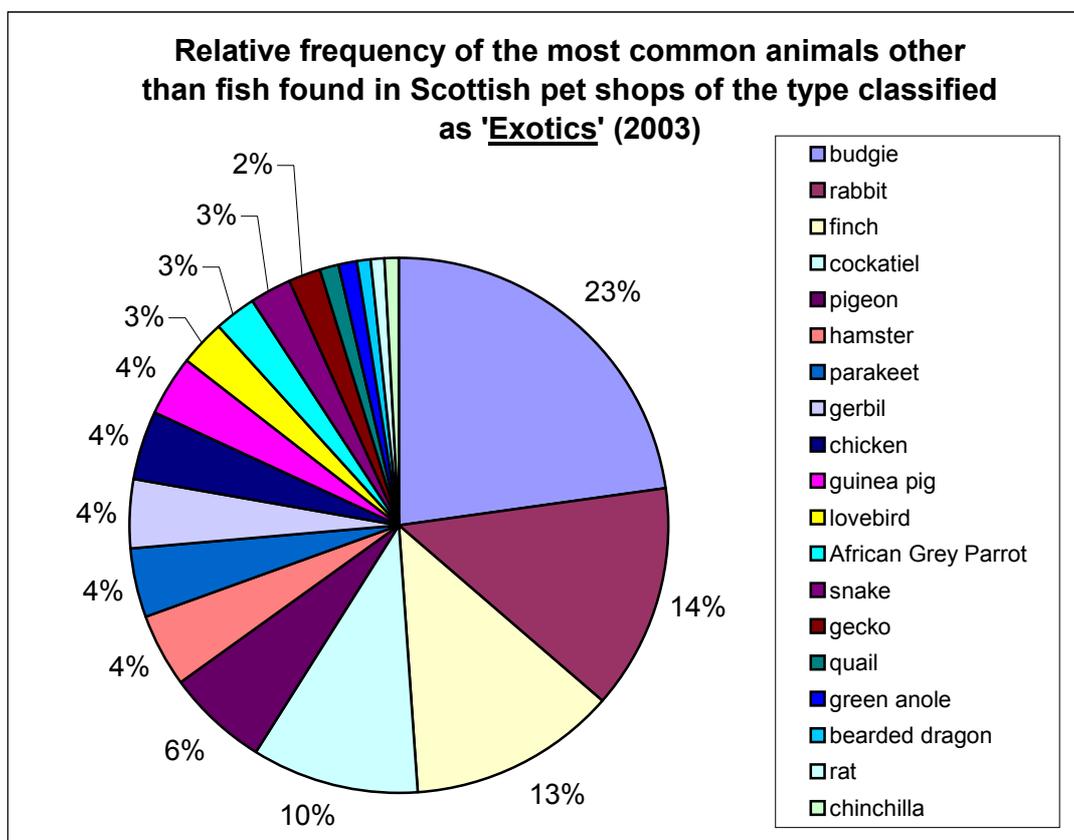


Figure 9. Relative frequency of the most common animals other than fish and invertebrates found in Scottish pet shops classified as 'Exotics' during 2003 (n=391). The values have been based in individuals seen by the investigator, and do not take into account neither fish nor animals kept in non-public areas of the shops. Other animals with lower frequency than 1% have not been included.

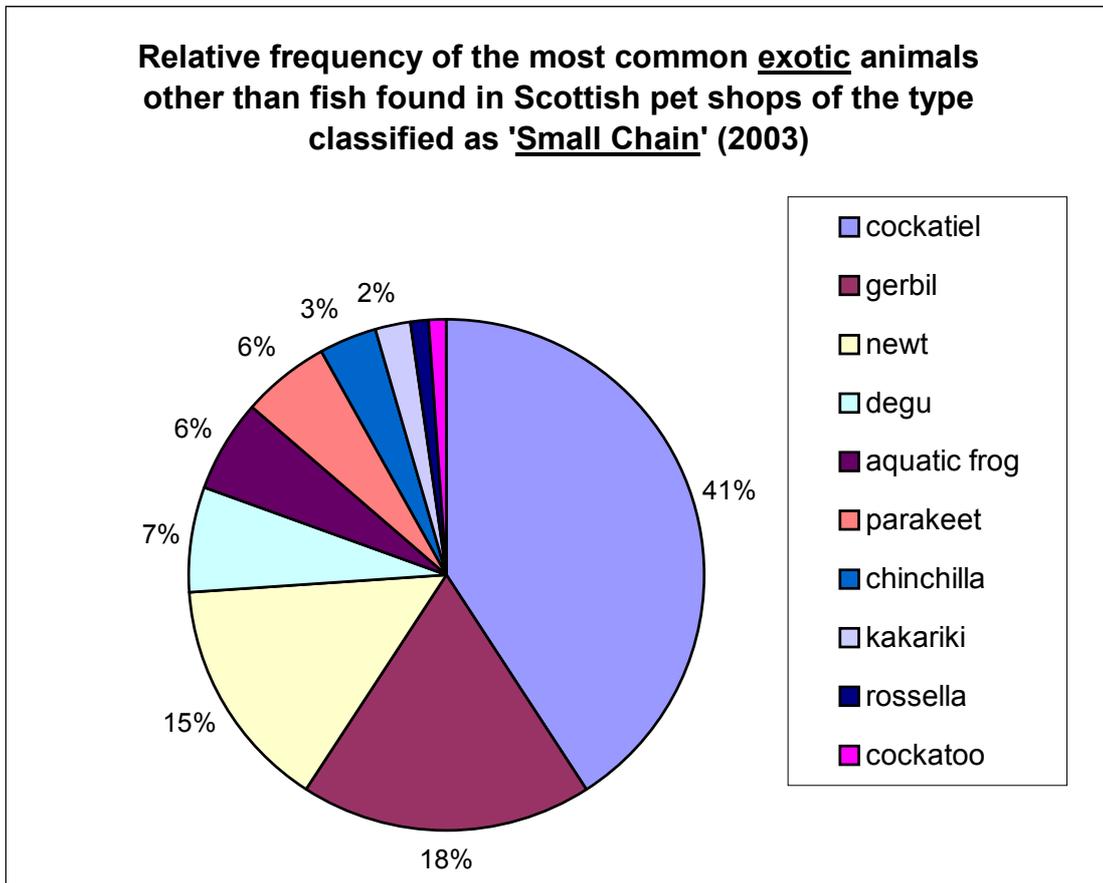


Figure 10. Relative frequency of the most common animals other than fish and invertebrates found in Scottish pet shops classified as 'Small chain' during 2003 (n=303). The values have been based in individuals seen by the investigator, and do not take into account neither fish nor animals kept in non-public areas of the shops. Other animals with lower frequency than 1% have not been included.

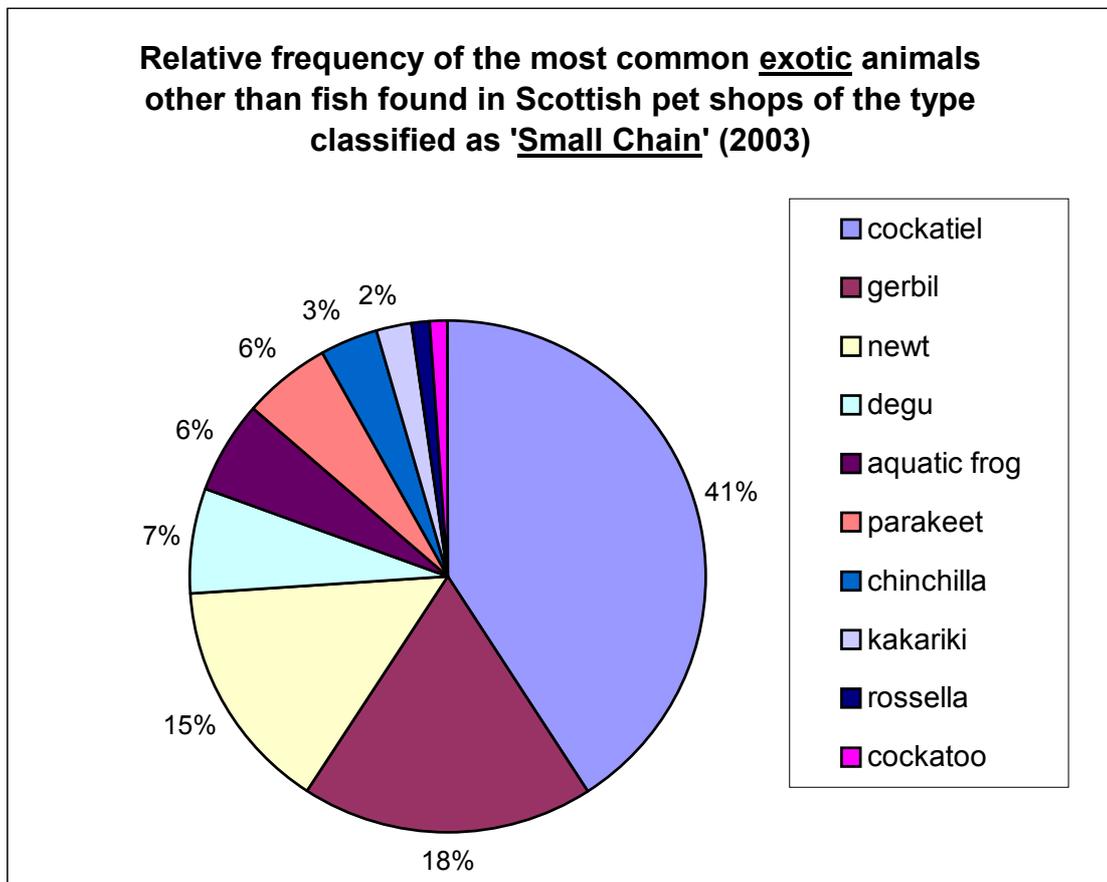


Figure 11. Relative frequency of the most common exotic animals other than fish found in Scottish pet shops classified as 'Small chains' during 2003 (n=88). The values have been based in individuals seen by the investigator, and do not take into account neither fish nor animals kept in non-public areas of the shops. Other animals with lower frequency than 1% have not been included.

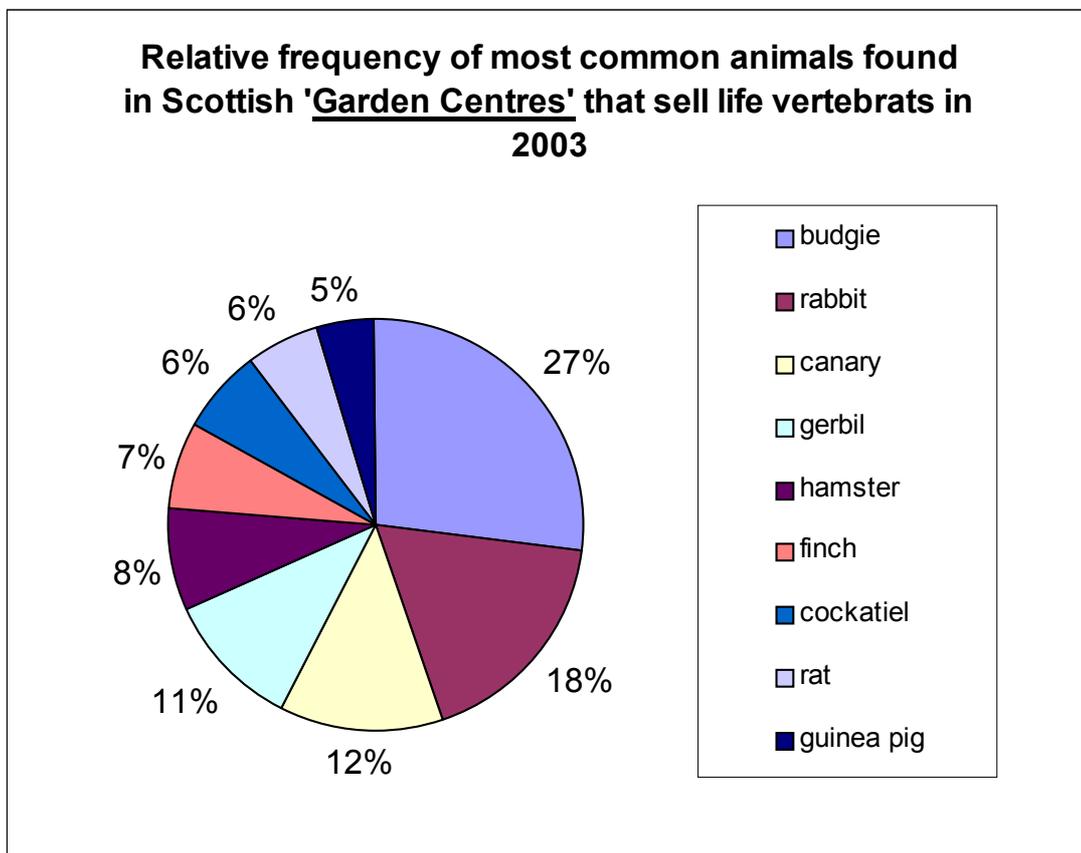


Figure 12. Relative frequency of the most common animals other than fish and invertebrates found in Scottish 'Garden Centres' during 2003 (n=163). The values have been based in individuals seen by the investigator, and do not take into account neither fish nor animals kept in non-public areas of the shops. Other animals with lower frequency than 1% have not been included.

Types of animals kept in pet shops

We have already seen that different types of pet shops tend to keep different types of animals. We can now look at all the shops together to see which are the most common animals sold as pets in Scotland through pet shops.

During the visits to the 75 random shops the investigator saw at least 2,300 terrestrial animals and more than 16,000 fish. During the visits to Garden Centres the investigator saw at least 153 terrestrial animals and during the visits to the 'exotics' shops including the 'extra' cases he saw at least 912 terrestrial animals. Therefore, during the whole of this study a total of more than 3,300 animals other than fish were seen.

If we extrapolate these values to the total population of pet shops, we can estimate that there are more than 8,000 animals in Scottish pet shops, more than 45,000 fish (in total more than 53,000 vertebrates). Probably several hundred thousands in the UK. The majority of animals kept in Scottish pet shops are fish, and as can be seen in figure 13 they are followed by birds and then mammals. Reptiles only represent 2% of the animals.

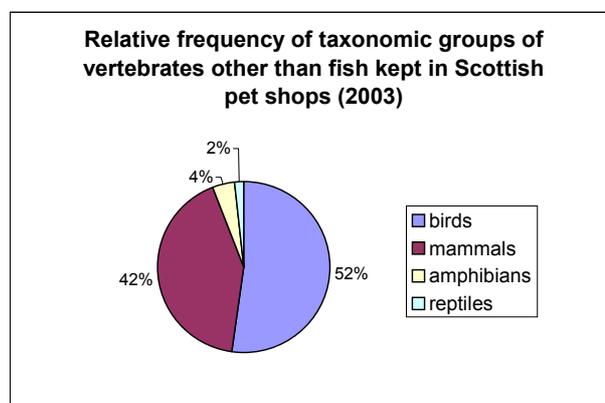


Figure 13. Relative frequency of taxonomic groups of vertebrates other than fish found in Scottish pet shops during 2003 (n=163). The values have been based in individuals seen by the investigator, and do not take into account neither fish nor animals kept in non-public areas of the shops.

If we analyse in more detail which type of animals are more commonly sold in Scotland from pet shops, we can see that budgies, hamsters, rabbits and finches cover the majority, followed by cockatiels, gerbils, guinea pigs and canaries (figure 14 and 15).

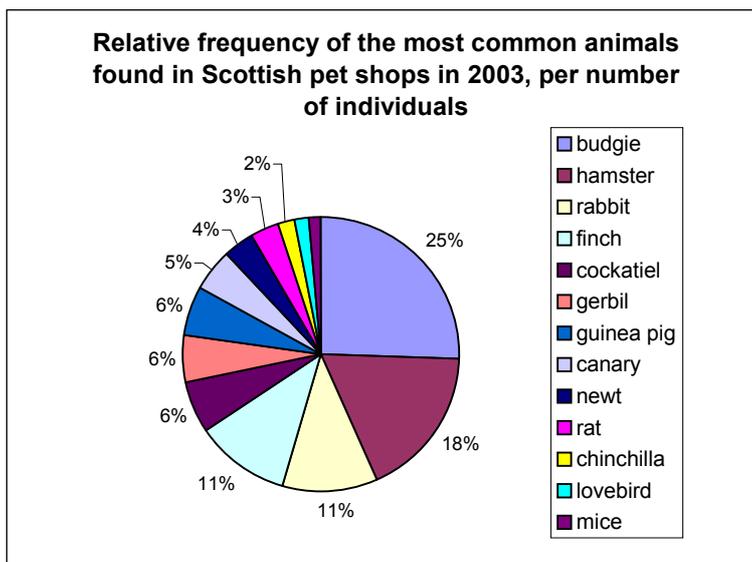


Figure 14. Relative frequency of the most common animals other than fish found in Scottish pet shops during 2003 (n=1971). The values have been based in individuals seen by the investigator, and do not take into account neither fish nor animals kept in non-public areas of the shops. Other animals with lower frequency than 1% have not been included.

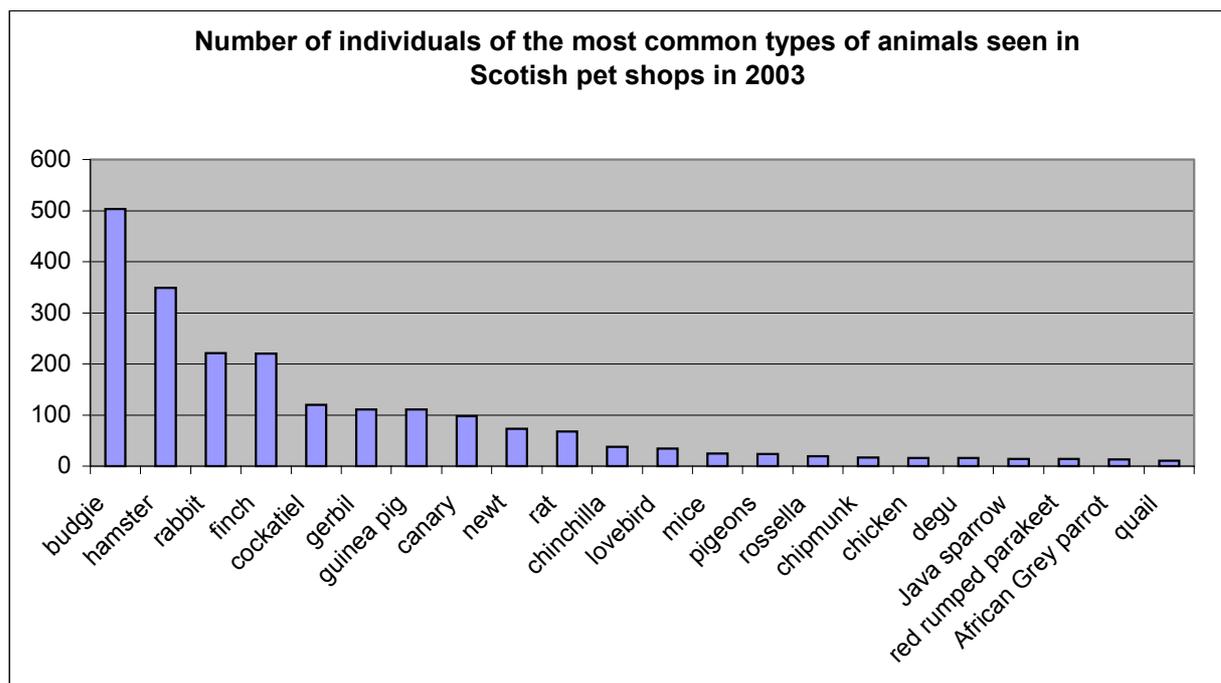


Figure 15. Number of individuals of the most common types of animals other than fish seen in Scottish pet shops during this study. The values have been based in individuals seen by the investigator, and do not take into account neither fish nor animals kept in non-public areas of the shops. Other animals with lower frequency than 0.5% have not been included.

It should be said, though, that many other types of animals have been seen in Scottish pet shops, but none in big enough quantities to be considered common. Also, the fact that budgies represent the majority does not mean that it is more likely to find a budgie in a pet shop than any other animal, because they tend to be housed in bigger numbers, which increase their representation. Figure 16 shows a more accurate picture of the animals most likely to be found in a Scottish pet shop during summer 2003 (winter animals may have different frequencies), since it does not take into consideration the number of individuals but just their enclosures. The most likely type of animal to be found is still fish (present in 84% of the Scottish pet shops and in 92% of the Scottish garden centres that sell live vertebrates) but after them it is equally likely to find a budgie, a hamster, a guinea pig or a rabbit (more than 40% of the shops keep any of these), and slightly less likely to find a gerbil, a cockatiel, a canary, a finch or a rat (although more than 20% of the shops keep them).

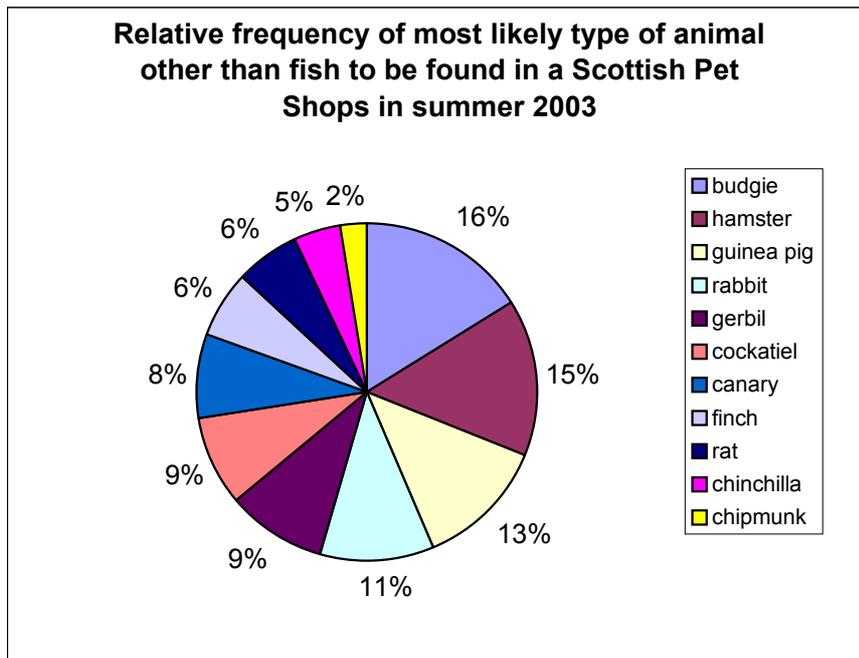


Figure 16. Relative frequency of most likely type of animal other than fish to be found in a Scottish Pet Shops in summer 2003 (n=326). The values have been based in individuals seen by the investigator, and do not take into account neither fish nor animals kept in non-public areas of the shops. Other animals with lower frequency than 1% have not been included.

Regarding exotic animals, figure 17 shows that the most likely exotic animal to be found in a Scottish pet shop (summer 2003) is a cockatiel, followed by chinchillas and parakeets. These are often considered domestic due to their relative commonness in the pet market, but in reality most of these animals are not different genetically than their wild counterparts, so they should be considered both wild and exotic.

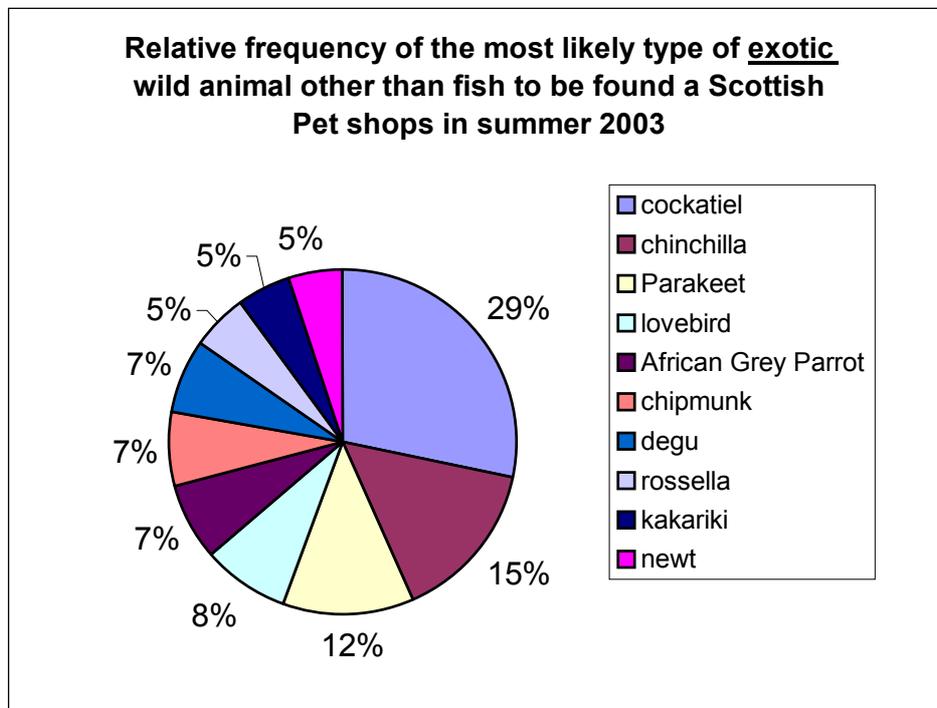


Figure 17. Relative frequency of most likely type of exotic wild animal other than fish to be found in a Scottish Pet Shops in summer 2003 (n=99). The values have been based in individuals seen by the investigator, and do not take into account neither fish nor animals kept in non-public areas of the shops. Other animals with lower frequency than 1% have not been included.

ABNORMAL BEHAVIOUR IN PET SHOPS

Most animals in pet shops are classed as domestic; however this does not mean that they do not suffer the problems associated with a captive life, nor that they do not develop such problems while staying in the pet shop.

A common problem found in any captive animal is the development of abnormal behaviour. We can say that an animal performs abnormal behaviour when it behaves in a way not normally seen in the wild by either wild or feral members of the animal's taxon. Abnormal behaviour can take different forms, but the most well known form is stereotypic behaviour.

Stereotypic behaviour

Repetitive and stereotyped behaviours are one of the most important indicators of long-term welfare problems. Odberg (1978) defines stereotypy as "morphologically similar patterns or sequences of behaviour, performed repetitively, and having no obvious function". The best known examples are the route-tracing steps of human prisoners and of animals kept in cages. The rocking and weaving movements of children with autism or other psychiatric disorders are also well known (Levy, 1944. Hutt and Hutt, 1970). Levy described various stereotypes in other species. Crib biting and wind-sucking by horses are described by Brion (1964), bar biting by sows is reported by Fraser (1975), and there are reviews of stereotypies by Odberg (1978), Broom (1981, 1983), Dantzer (1986), Fraser and Broom (1990) and Mason (1991a).

The question of how to decide whether an apparent stereotypy has a function is usually quite easily answered; whilst a single movement may be part of a normal functional system, frequent repetitions of movements are necessary only for certain limited purposes (Broom & Johnson, 2000). These purposes include locomotion to a particular place, and repeated feeding, respiratory, cleaning or display movements. A brief period of observation is usually sufficient to distinguish stereotypies from such movements (Broom & Johnson, 2000).

Most stereotypies, even those which involve little movement, such as sham chewing in pigs, or those which are prolonged such as the elaborate movement routines of some caged mink for example, are easy to recognise if behaviour is observed carefully (Broom & Johnson, 2000). However, it is true that in some cases distinguishing between stereotypies and other forms of behaviour can be problematic (Mason, 1991b), and for this reason it is always important to observe the animal and define with precision, which is the criteria that has been used.

As discussed by Dantzer (1986) and Mason (1991a), in most cases we do not know whether a stereotypy is helping the individual to cope with the conditions, has helped in the past but is no longer doing so, or has never helped and has always been a behavioural pathology. But in all cases the stereotypy indicates that the individual has some difficulty in coping with its conditions or situation and is an indicator of poor welfare (Broom, 1991; Broom & Johnson, 1993, 2000).

Despite the fact that an individual or population's degree of stereotypy does not necessarily correspond to the degree to which its welfare is impaired (Mason, 1991a), measuring the occurrence rather than the degree of stereotypia is a good indication of the existence of welfare problems, even if the degree of these problems cannot be measured, or the genesis of the behaviour investigated cannot be determined.

As suggested by Mason (1991b, 1993), stereotypies are heterogeneous in their source of origin, proximate causation and physical characteristics. Mason also states that stereotypies change over time in important aspects and therefore, it is sensible to use a definition that embraces all this heterogeneity.

Also, some stereotypes can constitute behavioural scars that stay with the animal even if the housing conditions that caused them have changed. In the case of pet shop animals, many are juveniles that have spent most of their lives in the shop, while others may have acquired abnormal behaviour in the site where they were born. In this study the genesis of the stereotypic behaviour witnessed was not taken into account, and all cases were treated the same. It was considered that, as long as the animals performing stereotypia remain in captivity and under unnatural circumstances, it is impossible to rule out the possibility that their present captive conditions, however improved, contribute in one way or another to the maintaining of such stereotypia.

The only common quantifiable behavioural aspect for all stereotypes using Odberg definition is the concept of repetition. Authors differ as to just how rigid or repetitive a behaviour pattern has to be before they will call it a stereotypy. Forrester (1980) stated that stereotypies are not completely inflexible, and Fraser & Broom (Broom 1983; Fraser and Broom 1990) define a stereotypy as being only 'relatively' invariant. The key element seems to be how many times a behavioural pattern should be repeated to fall into the definition.

One way around the problem is to use informational redundancy to quantify the repetition within behavioural

sequences (Stolba et al. 1983). Studies with pigs using this method concluded that repetitions of three or more times in the 30 seconds assessment period agreed with the results of information-redundancy analysis (Stolba et al. 1983). Other work in stereotypia in mink, also used three successive repetitions of a movement or sequence of movements as a criteria to identify stereotypies (Mason, 1994).

Following these criteria, when the investigator browsing in the shop witnessed an animal performing any sort of repetitive behaviour with no apparent function, the animal was recorded for a sufficient period of time to allow identification of a complete cycle of repetition. This often implied returning to the enclosure/cage several times during the visit. The behaviour was considered repetitive if:

- A particular movement, normally with a certain recognisable function, was repeated consecutively at least 5 times in an apparent lack of the normal function (i.e. walking endlessly without destination, becomes a repetitive pacing).
- An abnormal movement of the animal's body occurs at least three times in a period of consecutive three minutes (i.e. unusual twisting of the neck).

Once all possible cases of stereotypic behaviour were recorded, they were classified in the following categories:

- **Pacing:** Continuous walking/swimming back and forth, following the same path (or several similar paths), from one point to another, when performed with no special response to a transparent boundary (i.e. glass). This includes cases performed in or on water, or through air.
- **Circling:** A form of pacing where the animal continues around a circular path with no points easily singled out of where it ends or begins. This includes looping.
- **Bar biting or tongue playing:** The repeated biting, rubbing the mouth, licking or sucking on the bars or other parts of the enclosure.
- **Head bobbing & weaving:** Standing in one place and continuously moving the head up and down, or weaving to and fro.
- **Wheeling:** the compulsive use of a spinning wheel by continuously running in it
- **Digging:** Repeatedly digging (or trying to) a floor or a wall. Often performed on materials too hard for the animal to succeed in digging
- **Overgrooming/Overpreening:** Grooming to an excessive extent, pulling out hair or feathers, often leaving bald patches, irritated or broken skin.
- **Iteration with Transparent Boundaries (ITB):** Continuously walk/swim onto the glass or reflecting walls of an enclosure either attempting to climb on it, go through it, or responding to a reflection from it.

Considering all the definitions just mentioned, and analysing the tape recordings taken during the visits of the randomly selected sample of shops, we can see that the majority (55% n=75) of the Scottish pet shops selling animals in 2003 kept animals showing abnormal behaviour.

A great deal of these cases were fish performing ITB or pacing/swimming (figure 18). Although stereotypic behaviour is traditionally associated with mammals, fish (Saint Amant & Drapeau, 1998) and reptiles (Warwick, 1990; Warwick et al.1995) also show it when kept in captivity. However, it could be said that the high number of fish ITB cases found give an artificial high incidence of stereotypia in pet shops. This does not seem to be the case because if we exclude fish from the analysis about a third (33%, n=75) of the Scottish pet shops selling animals in 2003 still keep animals showing abnormal behaviour.



Figure 18. Fish in a Scottish pet shop performing ITB (Interaction with Transparent Boundaries), the most common stereotypia observed in this study.

‘Wheeling’ was considered as a stereotypia not only because it falls into the definition used but also because often is performed compulsively. This behaviour has been recognised as stereotypic (Koteja et al. 1999) but some authors may not accept it as such. If we do not count wheeling still more than a quarter (29%, n=75) of the pet shops show cases of animals other than fish performing stereotypic behaviour.

These percentages are high considering that there is an average of less than 100 animals per shop, and that the investigator only spent a few minutes in each shop, likely missing stereotypic animals that may not have been showing the behaviour during the visit.

The most common type of stereotypic behaviour seen was ITB, but if we do not count fish the most common type was pacing/circling, followed by digging (figure 19).

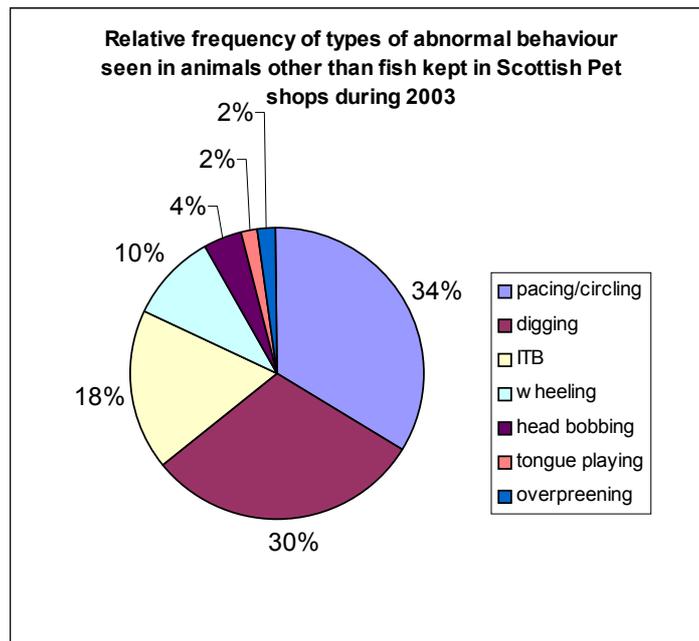


Figure 19. Relative frequency of types of abnormal behaviour seen in animals other than fish kept in Scottish pet shops during summer 2003 (n=50).

Although definitions of types of stereotypic behaviour vary from author to author, some attempts have been made to group several behaviours into main types. When the stereotypia occurs because of physical limitations of the captive environment, they have been classed as ‘cage stereotypes’ (Draper & Bernstein, 1963; Berkson 1967, Ridley & Baker, 1982). They tend to be locomotory, and are typical of small or barren cages, but can be altered by changes in the environment enrichment. Most cases of stereotypic behaviour seen in this study (92%, n=50) correspond to this type, and therefore it is reasonable to assume that the physical housing conditions of the shops enclosures are a likely cause of these abnormalities.

Types of shops showing stereotypic animals

If we look at which types of shops had more cases of abnormal animal behaviour we can see that by far 'exotics' shops have the highest percentage (67%, n=6), almost half of all the 'chain' shops showed such behaviour, and almost a third of the 'general' shops did (figure 20).

As far as which type of animals showed abnormal behaviour is concerned, more than three quarters (76%, n=50) of the animals other than fish showing abnormal behaviour were exotic animals. This value is not surprising because an exotic animal is more likely to be at odds with its environment, especially because it has maintained its genetic makeup that evolved in conditions very different from the captive ones. However, we should not assume that a domesticated animal is completely adapted to captive life; 24% of the animals showing abnormal behaviour prove otherwise.

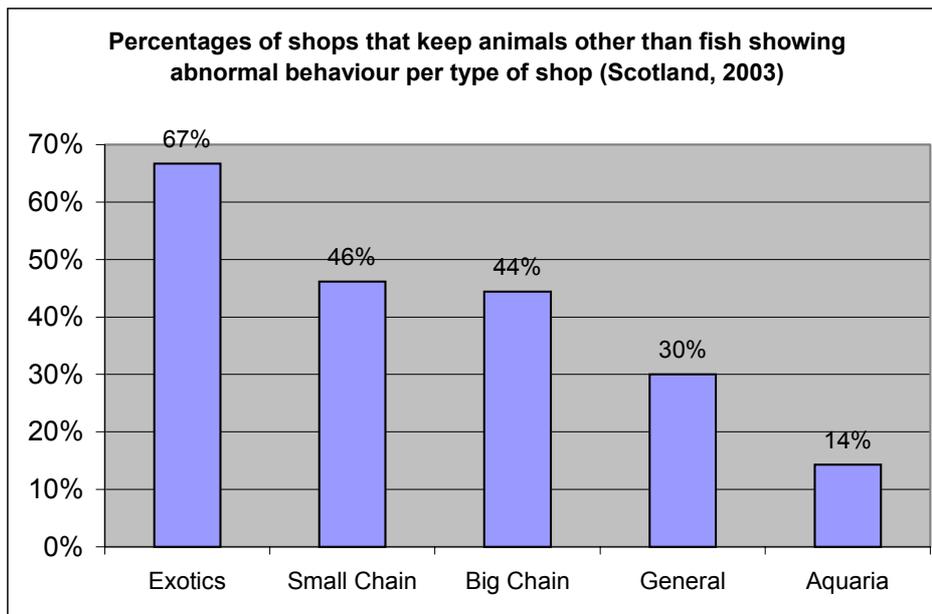


Figure 20. Percentages of shops that kept animals other than fish showing abnormal behaviour in Scottish pet shops during 2003.

As can be seen in figure 23 and table 4, gerbils were the animals most commonly seen stereotyping (figure 21); digging is a well documented abnormal behaviour in gerbils (Wiedenmayer, 1997).

In relative terms, though, cockatoos (75%) and pheasants (67%) were the cases with a majority of individuals showing abnormal behaviour (figure 24). Although only one shop kept pheasants (and therefore it is not possible to draw conclusions about them), four did keep cockatoos, so the results do show that cockatoos in pet shops seem to have difficulty in coping with their life conditions, and they express that difficulty with abnormal behaviour (mainly head bobbing). One cockatoo in particular showed one of the strongest stereotypic behaviour cases seen in this study (a very frequent looping, figure 22)

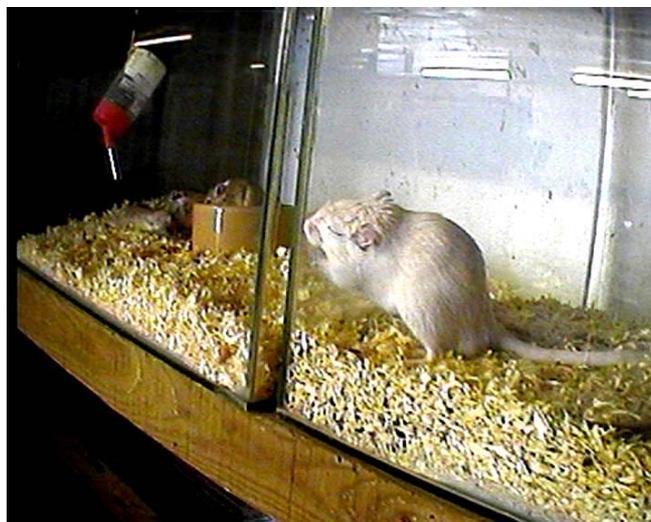


Figure 21. Gerbil stereotypically 'digging' in a tank enclosure in a Scottish pet shop recorded during this study (2003).



Figure 22. Cockatoo looping (circling) constantly in its cage. Picture taken in a ‘Small chain’ pet shop during this investigation (2003).

SHOP	Type shop	Animal	Number	Abnormal Behaviour
KIR055	G	Amazon parrot	1	Pacing
BIR007	EX	Budgie	1	Pacing
PET218	G	Budgie	1	Pacing
WHI125	G	Budgie	1	Pacing
ACO068	SCH	Canary	1	Pacing
PET111	BCH	Chipmunk	1	Wheeling
PET113	BCH	Chipmunk	1	Circling
PET156	BCH	Chipmunk	2	Wheeling
PET205	BCH	Chipmunk	1	Wheeling
BIR007	EX	Cockatiel	2	Pacing
ACO075	SCH	Cockatoo	1	Circling
MAR018	EX	Cockatoo	1	Head bobbing
PET207	EX	Cockatoo	1	Head bobbing
ACO075	SCH	Degu	1	Wheeling
JUN015	G	Degu	1	Digging
BIR007	EX	Frog	1	ITB
ACO170	SCH	Gerbil	2	Digging
ACO175	SCH	Gerbil	2	Digging
COU182	G	Gerbil	1	Digging
MAR018	EX	Gerbil	2	Digging
PAW099	G	Gerbil	1	Digging
PET113	BCH	Gerbil	1	Digging
PET216	G	Gerbil	1	Digging
ACO175	SCH	Hamster	3	Digging
ACO235	SCH	Hamster	3	ITB
CRE184	EX	Hamster	1	Digging
ACO170	SCH	Kakariki	1	Tongue playing
ACO172	SCH	Kakariki	1	Pacing
ACO175	SCH	Newt	2	ITB
AQU081	A	Newt	2	ITB
DOG049	G	Blue & gold macaw	1	Overpreening
MAR018	EX	Pheasant	1	Pacing
HAY144	G	Quail	5	Pacing

DAP186	G	Rabbit	1	ITB
MAR018	EX	Reeves pheasant	1	Pacing

Table 4. List of animals, shops and types of behaviour in all cases of abnormal behaviour observed during the study, with the exception of fish cases. Number = number of individuals performing the behaviour. A= Aquaria, BCH = Big chain, EX = Exotics, G = General, GC = Garden Centre, M = Minimal, SCH = Small chain.

As mentioned previously, stereotypic behaviour tends to be associated with mammals. Almost half (45%, n=11) of the types of mammals kept in Scottish pet shops were seen performing abnormal behaviour, but the percentage could have been higher because cats and dogs were only found in two shops and on both occasions the animals were sleeping. If we look at mammals that can be considered exotic, then the percentage rises to 60% (n=5).

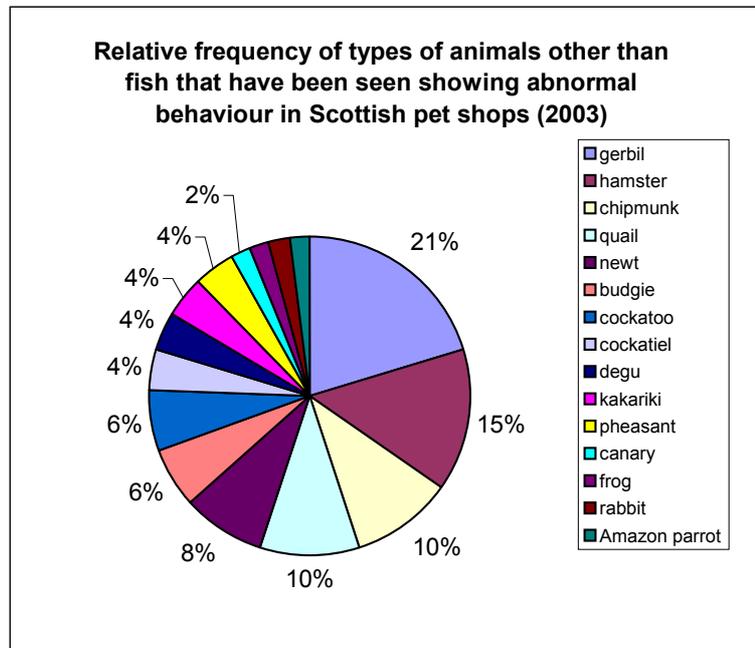


Figure 23. Relative frequency of types of animals other than fish that were seen showing abnormal behaviour in Scottish pet shops during summer 2003 (n=49).

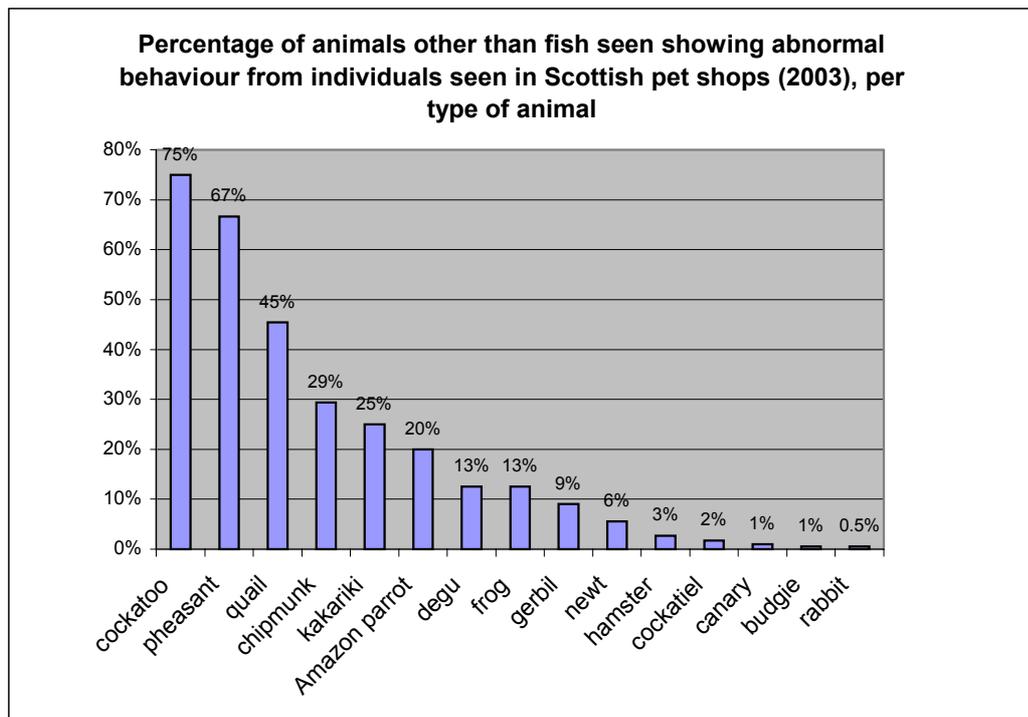


Figure 24. Percentage of animals other than fish seen showing abnormal behaviour from the individuals seen in Scottish pet shops (2003), per type of animal

If we look at general occurrence of abnormal behaviour in relation to individual animals seen, the percentage of cases detected from the total individuals seen is 2% (n=2295). Considering that this was detected with very short visits (average 20 min. and 30 sec.) a great proportion of which were spent talking to the shop assistant, and that animals like hamsters or chinchillas are nocturnal – they could well be stereotyping during the night not showing it during the visits – it is reasonable to expect that the actual percentage of stereotypic animals kept in Scottish pet shops is in fact higher than 2%. Incidentally, this percentage is the same found in UK zoological collections with a similar study (Casamitjana & Turner, 2001), a fact that is not surprising if we consider ‘captivity’ as the main cause of the behaviour.

Taking into consideration that the majority of animals kept in pet shops are domesticated, finding the same percentage of animals showing abnormal behaviour than in zoological collections (where most animals are exotic, and have spent longer periods of time in captivity) suggests that the housing conditions that may be responsible for abnormal behaviour may be worse in pet shops than in zoological collections.

Other cases of animal distress

Abnormal behaviour, in particular if taking the form of stereotypic behaviour, is an indication of welfare problems of a ‘chronic’ character. These, however, may be the result of the sum of individual incidents or situations that build up the stress of the animal until the point that it begins expressing its difficulties in coping with its environment in a way we can detect. Therefore, we should interpret the presence of abnormal behaviours as the tip of the ‘iceberg’, as clues that show something is not quite right. There are, however, other clues that can lead to the same conclusion. Sometimes animals show their stress, uneasiness or distress in other ways besides abnormal behaviour: vocalisations, lethargy, escape attempts, immunodepression, etc.

During this study other non-stereotypic animals that had clear escape attempts or showed signs of distress (caused by either the presence of customers or other animals in the shop) were seen. Although there is an element of subjectivity in identifying these cases, most of them can be correctly assessed with the relevant animal welfare knowledge. We found these cases in 15% of the pet shops (table 5 and figure 25).

Shop	Type shop	Clue of distress
ACO041	SCH	Degu jumping as attempting to escape
ACO128	SCH	Budgie stressfully hyperacting
ACO170	SCH	Degu apparent attempt to escape
ACO175	SCH	Hamster apparent attempt to escape
ACO235	SCH	Hamster apparent attempt to escape
BUG008	EX	Lizard distressed by children teasing
JUN015	G	Chinchillas distressed by being picked up
MAR018	EX	Amazon parrot vocalising upset by customers presence
MAR018	EX	African grey parrot vocalising in distress
PAL244	G	Guinea pig screaming in distress
PET207	EX	Cockatoo vocalising upset by customers presence
PET207	EX	Withdrawn macaw and conure in a cage corner
CRE184	EX	Hamster apparent attempt to escape by biting glass
NEO198	EX	Agitated bearded dragon when seeing other reptiles

Table 5. Cases where animals in Scottish pet shops were interpreted to be stressed, distressed or frustrated, and did not show so throughs stereotypic behaviour. A= Aquaria, BCH = Big chain, EX = Exotics, G = General, GC = Garden Centre, M = Minimal, SCH = Small chain.

Considering that animals showing abnormal behaviour are somehow disturbed, if we add the shops where these cases were witnessed (table 4) plus the shops in which animals wanting to escape, stressed or otherwise upset although not stereotyping were seen (table 5), we can say that the majority of the Scottish pet shops (57%, n=75) showed animals distressed probably by the conditions they were housed.



Figure 25. Two examples of animals distressed that did not show stereotypic behaviour, found in Scottish pet shop during 2003. On the left an Amazon parrot vocalising in distress (probably caused by the investigator's presence). On the right a Red bellied macaw and a Patagonian conure withdrawn in a corner of their cage (where they stayed during the entirety of the visit).

ENCLOSURE SIZE IN PET SHOPS

Any captive animal, by definition, has its movements restricted by the confines of an enclosure. This obviously also applies to animals in pet shops.

Some domestic animals may have been artificially selected to tolerate better the problems that captive life causes, but no matter how refined this selection process can be, there will always be an enclosure that is too small or too barren for the animal to live unstressed. Wild animals, even those that have been bred in captivity for generations and can be tamed, have the same genetic makeup in captivity than in the wild, so no artificial selection has changed that. These animals are even more susceptible to problems linked to the wrong housing conditions, since they evolved a body and a mind adapted to a completely different environment than the one they have to live in.

From all the characteristics of captive environments the available space to move tends to be the most studied, and also the aspect more dealt with in regulations. Several studies have already shown the effect of enclosure size in the behaviour of captive animals (Fisher et al. 1980, Estep et al. 1978, Innis et al. 1985, Hogan et al. 1988, Jensvold et al. 2001). Some work has been done in studying the effect of cage size in animals normally kept as pets, like a study in which experiments with budgerigars showed that too small cages and lack of company of other birds lead to abnormal behaviour (Birmelin 1990), or studies of the cage size effect in captive rodents (Steyermark & Mueller, 2002), gerbils (Wiedenmayer, 1996), hamsters (Kuhnem, 1999), guinea pigs (Zychlinski, 1989) or even fish (McGinty, 1991).

In this study the tape recordings created during the shops visits were used to estimate the size of the enclosures where the animals were kept. All visible animal enclosures were recorded, and still frames were taken from the video to estimate the enclosure proportions. During the visits, at one point or another, the investigator used either his hand or other objects of known size as a reference to estimate enclosure size. On many occasions the investigator asked the shop assistant for the specific size of particular enclosures, and often the assistant measured them with a tape measure if he/she did not know (figure 26).

Very often two of the three cage dimensions could be easily measured due to the fact they had bars regularly distributed along the cage, so by counting the bars and measuring the space between them (which could be easily done by recording the investigator finger touching them) two of the three dimensions could be measured (figure 26). However, on some occasions, one of the three dimensions (normally the 'depth' of a cage) was difficult to measure either because the lack of bars or because the image was distorted by the wide-angle camera lens. To overcome this problem, the same video-camera was used to record from all possible angles and distances a box with a mark grid in all dimensions, and frames that would match the size and angle of a particular enclosure shots were used for comparison (figure 27). When a match was found with the help of an angle measuring ruler the depth of the cage could be estimated.



Figure 26. Two methods used to estimate enclosure size in Scottish pet shops. Left: shop assistant measuring a cage at the request of the investigator. Right: using a finger as a reference size to estimate the distance between two cage bars.

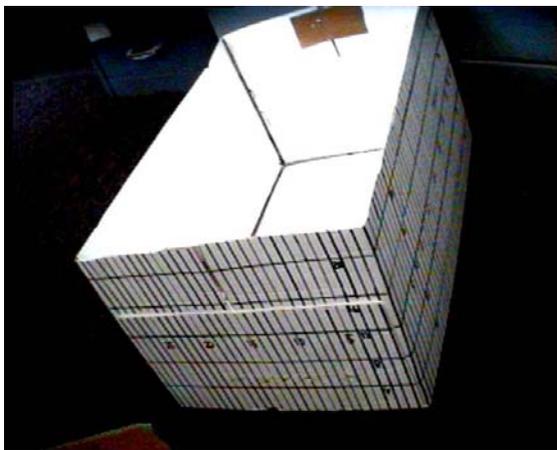


Figure 27. Box used as a control reference size to estimate ‘depth’ of some cages found in Scottish pet shops. This is one particular shot from a particular angle from the hundreds of shots that were used as reference (see text).

It should be said, though, that all measurements obtained using the methods described are still estimations that could incur an error. However, it is estimated that such error is inferior to 5 cm for each dimension, possible inferior to 3 cm in most cases.

Both the area and the volume of a cage could easily be calculated when the ‘width’, ‘depth’ and ‘height’ of an enclosure in a cube or box shape was estimated from either the footage or direct measurement. When the cage had other shapes, some other geometrical calculations were needed.

After having estimated floor area and volume for each cage, and calculated the available space for each animal taking into account the number of animals in each cage (which was always counted during the investigation and recorded either verbally or using a tapping code system on the microphone in the cases the shop assistant was too close), a comparison was made with minimum recommended sizes contained within the regulations or guidance documents. These were the recommended size stated for mammals in ‘The Pet Animals Act 1951 Model Standard for Pet Shop Licence Conditions’ (from now on ‘LGA Standards’) published by the Local Government Association of Britain before devolution (there is not yet a different version for Scotland), plus specific pet shops licence conditions of particular Scottish local authorities that specify minimum enclosure sizes.

Since these regulations tend to make a distinction between mammals and birds, and since the flying abilities of birds made cage volume more important than in mammals, a separate analysis was made for each of the two groups. Due to the fact that there are not minimum recommended enclosure sizes for fish or reptiles, no analysis of the enclosures of these groups was made.

Mammals’ enclosure sizes

To assess which are the recommended minimum enclosure sizes for mammals, the minimum sizes found in either ‘the Pet Animals Act 1951 Model Standard for Pet Shop Licence Conditions’ published by the Local Government Association (table 6), or the standard licence conditions from Scottish local authorities that provided this information on request (table 7) were used. Only two local authorities specified enclosure size for mammals, but both specified exactly the same sizes.

Animal	Number of animals							Minimum cage depth	Minimum cage height
	1-4	5	6	7	8	9	10		
Mice, hamsters, gerbils	450	525	600	675	750	825	900	25	25
Rats	675	785	900	1010	1125	1235	1350	30	30
Guinea Pigs	1350	1570	1800	2020	2250	2470	2700	30	30
Rabbits up to 2kg, kittens, ferrets, chinchillas, chipmunks	2250	2625	3000	3375	3750	4125	4500	40	30
Puppies up to age of 12 weeks minimum	10,000	12,500	15,000	17,500	20,000	22,500	25,000	Double high shoulder minimum	0.9 m.

Table 6. Minimum floor area (square cm) recommended for mammals kept in British pet shops from ‘the Pet Animals Act 1951 Model Standard for Pet Shop Licence Conditions’ published by the Local Government Association. These minimum floor areas apply to young stock; for adult stock offered for sale, the dimensions should be doubled.

Animal	Minimum floor area		Minimum cage height
	Single	Each additional	
Mice	200	50	20
Hamsters	300	75	20
Gerbils	300	75	20
Rats	500	125	20
Guinea pigs	700	175	20
Rabbits	2000	500	50
Kittens	2000	500	50
Puppies	10000	2500	50

Table 7. Minimum floor area (square cm) recommended for mammals kept in some Scottish pet shops from available pet shop licence conditions of Scottish local authorities. These minimum floor areas apply to young stock; for adult stock offered for sale, the dimensions should be doubled.

Although most mammals kept in Scottish pet shops seem to be kept in enclosures of a size within the minimum specified by the regulations (fact that can only be ascertained knowing the animals' age), most enclosures were very small. 43% of the individual mammals kept in the Scottish shops in 2003 were in enclosures that would become smaller than the minimum specified by regulations in the course of the animal's natural growth. Only 57% of the animals would be still kept in enclosures with at least the minimum recommended size if they reached adulthood before being sold (table 8 shows the worse mammal cases in this respect). Due to the fact that most mammals sold in pet shops have a very fast growth rate, the possibility of reaching adulthood in the shop is by no means preposterous, so this value is a clear indication of the space restrictions of many pet shops. Almost half of the shops (44%) had at least one of these cases, and the majority of the shops with mammals (55%, n=60) did.

SHOP	Type	Mammal	Number	Area	Volume	Area below recommended
DAP186	G	Rabbit	3	2250	101250	-2250
DAP186	G	Rabbit	2	2250	101250	-2250
ACO041	SCH	Rabbit	1	2400	96000	-2100
ACO075	SCH	Rabbit	1	2400	84000	-2100
ACO172	SCH	Rabbit	1	2400	96000	-2100
PET115	G	Chinchilla	1	2500	150000	-2000
ACO075	SCH	Rabbit	1	2520	88200	-1980
ACO128	SCH	Rabbit	1	2520	100800	-1980
ACO070	SCH	Chinchilla	1	2600	182000	-1900
ACO172	SCH	Chinchilla	2	2600	182000	-1900
ACO128	SCH	Rabbit	1	2700	108000	-1800
ACO175	SCH	Guinea pig	1	1800	63000	-900
ACO170	SCH	Guinea pig	1	1860	74400	-840
COU182	G	Guinea pig	2	1920	67200	-780
COU182	G	Guinea pig	1	1920	67200	-780
ACO170	SCH	Rat	2	814	32560	-536
FOR051	G	Hamster	2	450	9000	-450
ACO235	SCH	Hamster	1	560	16800	-340
NOA199	G	Gerbil	1	600	18000	-300
JUN015	G	Degu	2	2500	87500	-200
PET218	G	Degu	2	2500	125000	-200

Table 8. Worse cases of mammal enclosures in Scottish pet shops that would become smaller than the recommended size if the animals inside reach adulthood. Area values in square cm; volume values in cubic cm. A= Aquaria, BCH = Big chain, EX = Exotics, G = General, GC = Garden Centre, M = Minimal, SCH = Small chain.

Figure 28 shows that the majority of the very small mammals kept in Scottish shops are in enclosures that will become too small when the animals will reach adulthood, and these are precisely the mammals that will reach that state faster.

It could be said that the mammals mentioned would be moved to a bigger enclosure when they grew (if still not sold), but the reality is that the number of available enclosures in a pet shop is very limited, and often the mammals in question were kept in the biggest enclosure available at the shop (i.e. rabbits and guinea pigs), which later on may become inadequate.

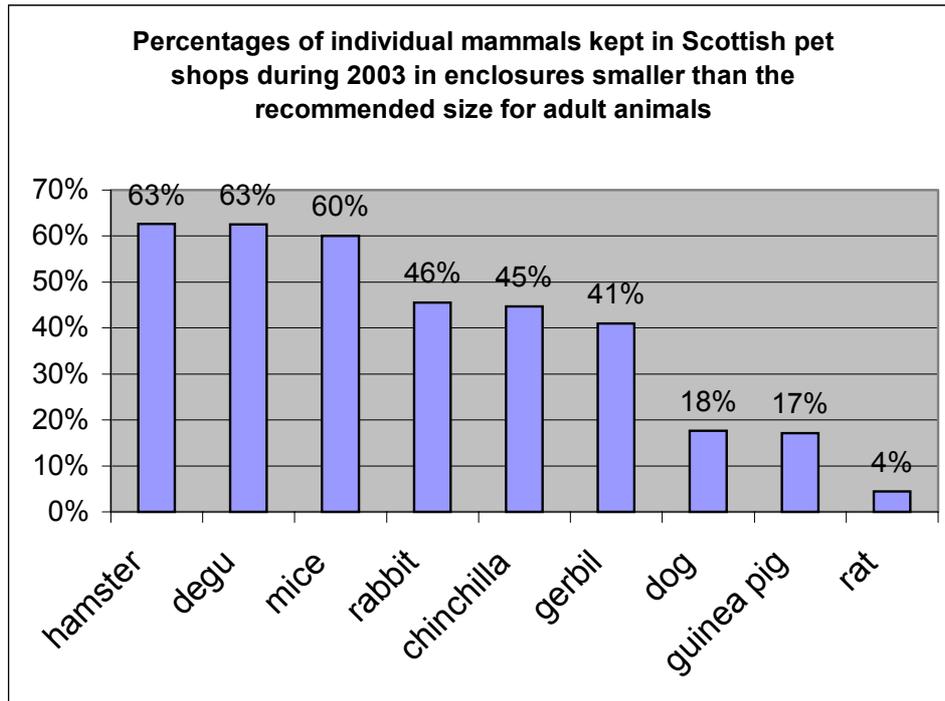


Figure 28. Percentage of individual mammals kept in Scottish pet shops during 2003 in enclosures smaller than the recommended size for adult animals of their species, ordered by type of animal.

The estimated average available enclosure floor area and available enclosure volume per either enclosure or individual for each type of mammal kept in Scottish pet shops can be seen in table 9 and figure 29. It can be seen that animals like chinchillas have much less available space than chipmunks, despite being considerably bigger and having the same recommended enclosure size. However, proportionally more chipmunks were seen showing abnormal behaviour than chinchillas (see chapter above), and this could be explained by the latter being nocturnal. Chinchillas might have shown difficulties in coping with enclosure size if they were diurnal animals most active during the shop's opening times.

Mammal	<u>Aver. area</u>	<u>STD(area)</u>	<u>Aver.vol</u>	<u>STD(volume)</u>	<u>n</u>	<u>Aver.ind</u>	<u>Aver.area per indiv.</u>	<u>Aver.volume per indiv.</u>
Mice	1133	926.64	29667	29666.67	6	4.17	272	7120
Hamster	1449	676.88	61862	42699.25	214	1.64	881	37609
Gerbil	1487	809.90	60697	56432.66	52	2.13	697	28435
Rat	3232	1381.10	152570	87274.20	28	2.39	1351	63761
Degu	2771	543.80	174357	59685.78	7	2.29	1213	76281
Guinea pig	8357	13628.58	744852	1740116.12	55	1.80	4643	413807
Chipmunk	10792	5661.07	1949648	1404896.86	8	2.13	5079	917481
Chinchilla	5172	3594.11	466458	542262.68	23	1.61	3215	289960
Rabbit	11869	17475.91	1046295	2160394.86	128	1.66	7166	631725

Table 9. Estimated average available enclosure floor area and available enclosure volume per either enclosure or individual for each type of mammal kept in Scottish pet shops during summer 2003. Aver = average, vol = volume, ind or indiv = individual, STD = Standard deviation, n= number of cages assessed. All area values in square cm, and all volume values in cubic cm.

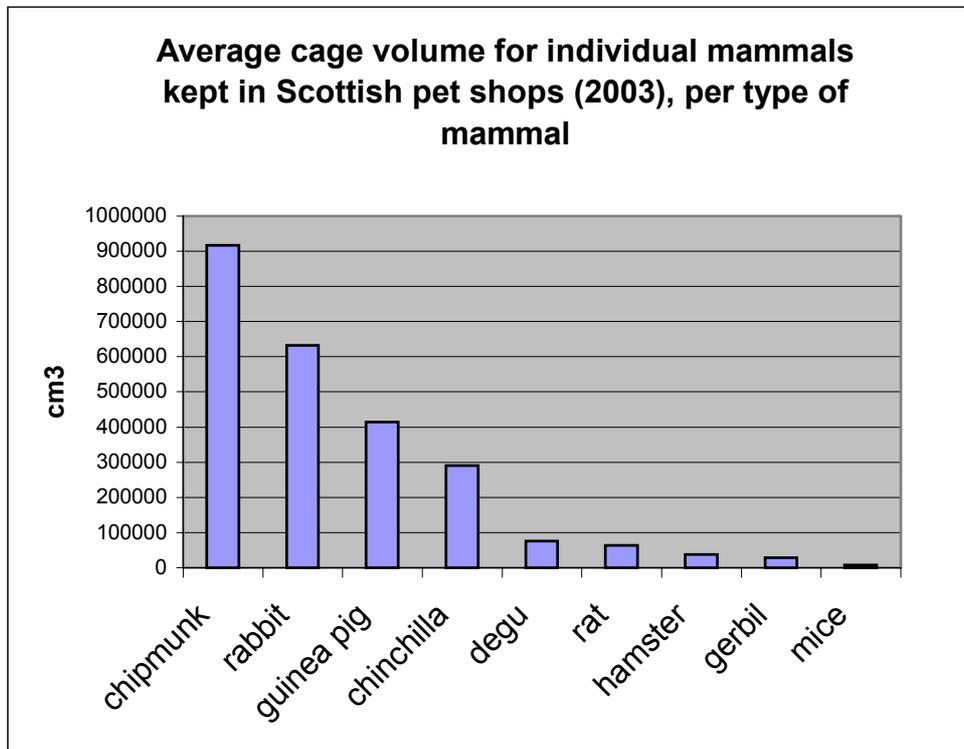


Figure 29. Average cage volume for individual mammals kept in Scottish pet shops during 2003, per type of mammal. Values in cubic metres. Relevant statistical parameters can be found in table 9.

Table 9 shows that there is a considerable variability on enclosure size per type of animal, but does not show how many mammals are kept in enclosures much smaller than the average size. If we analyse the issue of sub-standard enclosures in more detail (mammals with much less space than the average mammal), we can see that at least 25% (n=936) of the individual mammals kept in Scottish pet shops have an available volume of less than a quarter of the average volume found in this investigation for all individual mammals of the same type. These cases could be caused by either very small enclosures or by overcrowding of average size enclosures, but the data suggest the second reason is more likely. As can be seen in figure 30 there is certain correlation between the reduction of available volume and the number of individuals per enclosure, which suggest overcrowding.

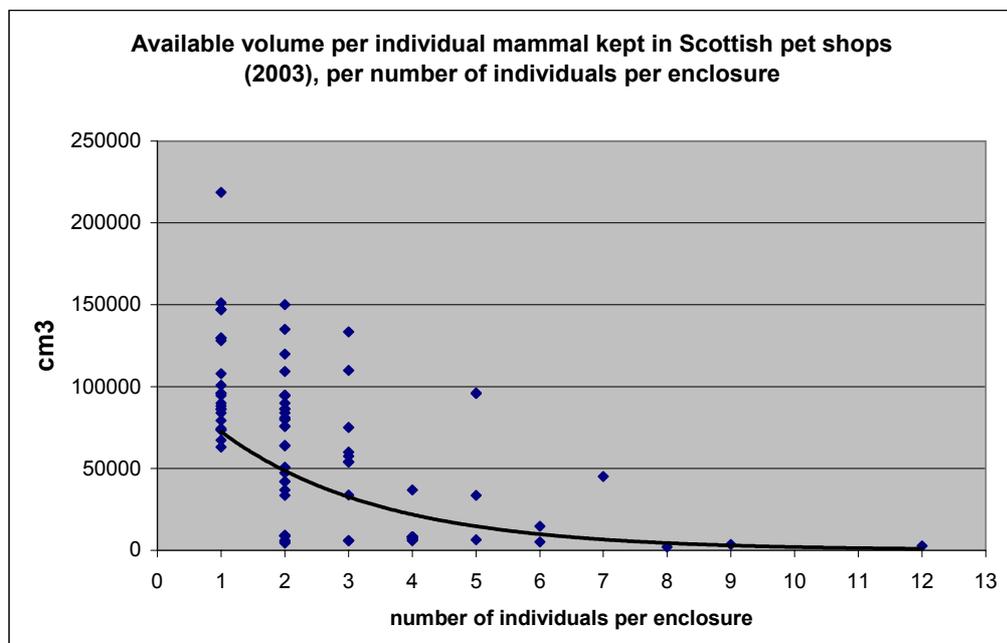


Figure 30. Available volume per individual mammal kept in Scottish pet shops during 2003, per number of individuals per enclosure. These are only cases where the available volume is less than a quarter of the average volume, and therefore these cases are at risk of overcrowding. The line shows the regressed exponential function.

It is interesting to note that most mammal enclosures in Scottish pet shops are very close in size to the minimum recommended by regulations. Instead of finding this in the minority of cases, as you would expect from an

industry that has animal welfare as a priority, it is found in the majority, which is what you would expect of an industry more concerned in having the maximum number of animal on offer within a given available space. Good examples of this can be seen in figures 31 and 32, where the cases of rabbits and gerbils are shown respectively. The case of rabbits is the most spectacular, because with the exception of 'Big chain' shops (which have the most available space) the rest of types of shops give to rabbits enclosures very much on the minimum recommended size values (figure 33). In the case of gerbils this effect is much less severe, with only half the gerbils under those conditions (although considering how small the minimum recommended cages for gerbils are it is surprising how many shops have opted not to give them more room).

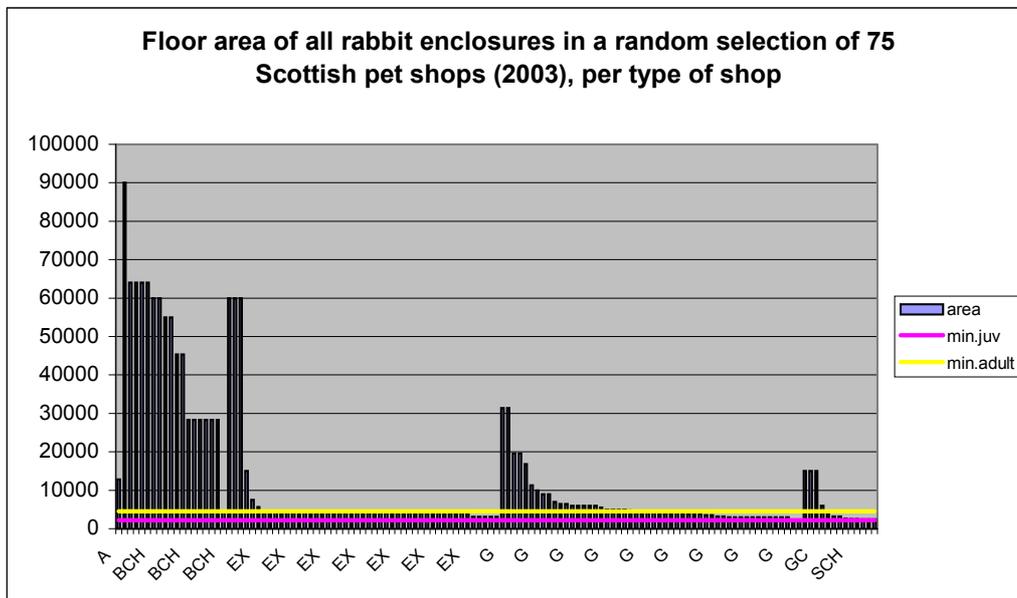


Figure 31. Floor area of all rabbit enclosures seen in Scottish pet shops during this study (2003). Values in square cm. Pink line represent the recommended minimum floor area for juvenile individuals while the yellow line represents the recommended minimum floor area for adult rabbits. A= Aquaria, BCH = Big chain, EX = Exotics, G = General, GC = Garden Centre, M = Minimal, SCH = Small chain.

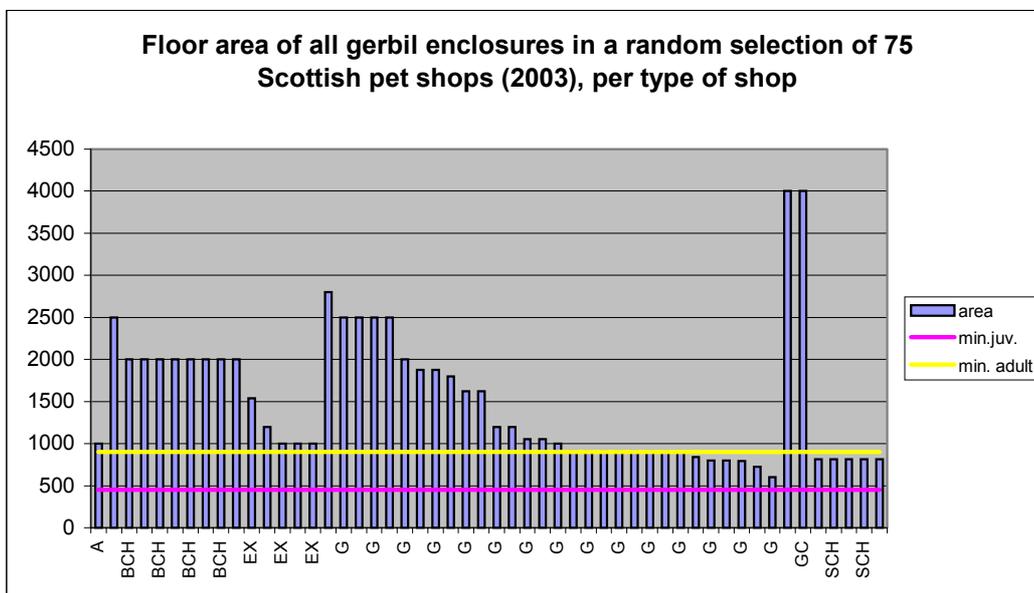


Figure 32. Floor area of all gerbil enclosures seen in Scottish pet shops during this study (2003). Values in square cm. Pink line represent the recommended minimum floor area for juvenile individuals while the yellow line represents the recommended minimum floor area for adult gerbils. A= Aquaria, BCH = Big chain, EX = Exotics, G = General, GC = Garden Centre, M = Minimal, SCH = Small chain.



Figure 33. Overcrowded rabbit enclosure seen in a Scottish pet shop during 2003.

Birds' enclosure sizes

To assess which are the recommended minimum enclosure sizes for birds, the minimum sizes found in the standard licence conditions from Scottish local authorities that provided this information on request was used (table 10). The LGA Standards do not specify bird enclosure sizes.

STOCKING DENSITIES - CAGED BIRDS

	Length (cm)	Single	Each Additional
Parrots, Parakeets, Budgerigar, etc			
African Grey:		1250	635
Amazon	Up to 35	1000	500
	35-40	1250	625
	over 40	2000	750
Budgerigar		650	200
Cockatiel		1000	250
Cockatoo	Up to 35	1250	625
	35-40	2000	1000
	over 45	2750	1325
Lovebird		750	200
Macaw Over 60	Up to 40	1250	625
	40-60	2250	1000
	Over 60	3750	1200
Parakeet (including Conure, Kakariki, Rosella)	Up to 25	1000	250
	25-35	1000	250
	Over 35	1400	450
Parrot (including Caique, Pronus, Senegal, Mayer's)	Up to 30	800	275
	30-35	1250	625
	Over 30	1500	750
Parrolet		400	200
Hanging Parrot		450	250
Lories and Lorkeets	Up to 22.5	800	250
	22.5-30	1250	375
	Over 30	2000	500
Seed Eaters			
Canary		650	250
Cardinal		1000	250
Dove and Pigeon	Up to 22.5	450	250
	over 22.5	1250	625
Finch (incl. Mannikin Silverbill Sparrow Waxbill)	Up to 12.5	650	100
	12.5-17.5	750	150
	Over 17.5	1000	200
Grossbeak		1000	200

Quail	Up to 15	450	250
	15-20	650	375
	Over 20	1000	500
Weaver	Up to 15	650	150
	over 15	1000	200
Whydah (male with full tail)	up to 40	1000	200
	over 40	2000	275
- female and male in non-breeding plumage as Weaver			
Softbills			
Barbet	Up to 20	1250	275
	Over 20	1400	450
Bulbil, Fruitsucker		1000	250
Fairy bluebird, Oriole		1250	250
Jay, Jay-thrush (Laughing thrush)	Up to 25	1500	250
	25-35	2000	500
Magpie	over 35	4000	1000
Mynah hill		1500	250
Pekin robin, Mesia		1000	200
Starling (Incl. small mynahs)	Up to 20	1500	250
	over 20	1000	200
Tanager, Sugar bird	Up to 15	1000	250
	Over 15	1000	250
Thrush (incl. Shama)		1000	375
Toucan		3750	1000
Toucanette, Aracari		2000	625
Tlouraco		2000	625
Zosterops		750	100

Table10. Stocking densities and minimum floor area (square cm, column 3 and 4) recommended for some birds kept in some Scottish pet shops taken from available pet shop licence conditions of Scottish local authorities. The second column shows in centimetres the length of the birds to be kept, which in some cases would vary with age, and others with species/variety.

The investigator saw 1046 individual birds in Scottish pet shops whose recommended minimal enclosure floor area is known (not all species are included in the local authority lists of enclosure sizes). From these, 4% are suspected to be kept in cages with an area smaller than the minimum area recommended in such regulations, 5% are suspected will be kept in cages with an area smaller than the minimum recommended in such regulations when the birds are medium size, and 9% of these are suspected that will be kept in cages with an area smaller than the minimum recommended when the birds are either fully grown (if they are still in the same enclosure) or belong to the biggest taxa.

13% of the pet shops had cases of birds suspected of being kept in too small cages in relation to the recommended sizes (table 11).

Shop	Type	Birds	Number	area (cm ²)	young	growing	grown
HAY144	G	Amazon parrot	1	1600			-400
PET156	BCH	Bengalese finch	16	3360			-640
ALL078	M	Budgie	4	875	-375	-375	-375
COU182	G	Budgie	9	1584	-666	-666	-666
HAY144	G	Budgie	11	2100	-550	-550	-550
HAY144	G	Budgie	10	2100	-350	-350	-350
ACO067	SCH	Cockatiel	5	1606	-394	-394	-394
ACO067	SCH	Cockatiel	4	1606	-144	-144	-144
WHI125	G	Conure	1	1296			-104
COU182	G	Diamond dove	2	1584		-291	-291
PET207	EX	Ducorps cockatoo	1	1156	-94	-844	-1594
MAR018	EX	Finches	6	1800			-200
MAR018	EX	Finches	6	1800			-200
HAY144	G	Finches	12	2100			-1100
PET207	EX	Mealy Amazon parrot	1	1600			-400

MAR018	EX	Nanday conure	1	900	-100	-100	-500
PET207	EX	Red belied macaw	1	3600			-150
ACO172	SCH	Parakeet	2	1584			-266
CRE184	EX	Parrot	1	1156		-94	-344

Table 11. Cases found in Scottish pet shops with bird's enclosure floor area in cm² below the minimum recommended. The fifth column show the area found, while the last three columns show the area below recommended. In the context of this table, the columns 'young', 'growing', 'grown' are based in length of the parrot, and therefore are also synonymous of 'small' 'medium' and 'big' for the cases that refer to varieties, not age. The values have taken in consideration those species that grow to smaller sizes than other members of their close taxonomic group. A= Aquaria, BCH = Big chain, EX = Exotics, G = General, GC = Garden Centre, M = Minimal, SCH = Small chain.

The estimated average available enclosure floor area and available enclosure volume per either enclosure or individual for each type of bird kept in Scottish pet shop can be seen in table 12; in it we can see that sometimes finches have more available space than some parrots.

Animals	Aver area	Aver volume	STD	N	Aver.indiv	Aver.area per indiv	Aver.volume per indiv.
Nanday conure	900	900		1	1	900	900
Green bengalese finch	1800	63000		1	3	600	21000
Finches?	7500	375000		1	15	500	25000
Parakeet?	2800	84000	0.00	3	2	1400	42000
Goldean finch	3930	235800	806.10	2	5.5	715	42873
Lovebird	2446	105937	485.70	7	2	1223	52969
Cardinal finches	1800	63000		1	1	1800	63000
Peach faced lovebird	3200	192000	0.00	2	3	1067	64000
Barnards parakeet	6800	204000		1	3	2267	68000
Ducorps cockatoo	1156	69360		1	1	1156	69360
Bourkee	2520	141120		1	2	1260	70560
Conure	2520	141120		1	2	1260	70560
Green cheeked conure	2520	141120		1	2	1260	70560
Grey ringneck parakeet	2520	141120		1	2	1260	70560
Ringneck parakeets	2520	141120		1	2	1260	70560
Finches	4409	511755	5613.05	15	7.2	612	71077
Sunconia conure	1156	73984		1	1	1156	73984
Black headed caique	2800	84000		1	1	2800	84000
Patagonian	2800	84000		1	1	2800	84000
Diamond dove	2552	116864	838.31	3	1.3	1914	87648
Java sparrow	3440	240800	0.00	3	2.7	1290	90300
Conure (chiconia?)	1296	90720		1	1	1296	90720
Blue headed pionis (parrot)	1683	92565		1	1	1683	92565
Mealy Amazon parrot	1600	96000		1	1	1600	96000
Rosella	2634	157400	1113.71	6	1.5	1756	104933
Hahns macaw	1600	112000		1	1	1600	112000
Amazon parrot	1800	118000	282.84	2	1	1800	118000
Red neck parakeet	3500	245000		1	2	1750	122500
Alexandrine parakeet	2520	141120	0.00	2	1	2520	141120
Ecclectus parrot	2520	141120		1	1	2520	141120
Jendaya conure	2520	141120		1	1	2520	141120
Red lored amazon	2520	141120	0.00	2	1	2520	141120
Sun conure	2520	141120		1	1	2520	141120
Bengalese finch	4740	872400	3531.72	4	5.3	903	166171
Parakeet	2696	212030	1009.19	4	1.3	2157	169624
Meyers parrot	3136	175616		1	1	3136	175616
Budgie	5593	1020870	11368.27	99	5.1	1101	200927

Zebra finches	4213	756676	5505.46	8	3.5	1204	216193
Senegal parrot	2760	220560	339.41	2	1	2760	220560
Red belied macaw	3600	288000		1	1	3600	288000
Orange winged amazon parrot	6400	288000		1	1	6400	288000
Red rump parakeet	4018	634453	3118.10	6	2	2009	317227
Canary	4404	838145	7537.82	35	2.6	1694	322364
Minha	4400	342000	2262.74	2	1	4400	342000
African Grey Parrot	3873	396560	1273.06	12	1.1	3575	366055
Cockatiel	6226	1058766	14315.32	34	2.9	2160	367327
Umbrella cockatoo	4500	405000		1	1	4500	405000
Quail	11400	2056000	35341.97	3	3.9	2916	525953
Pigeons	80000	16000000		1	24	3333	666667
Bear eye cockatoo	7000	1120000		1	1	7000	1120000
Blue and gold macaw	6246	1343413	5309.66	2	1	6246	1343413
Cockatoo	11640	1862400		1	1	11640	1862400
Macaw	15000	2550000		1	1	15000	2550000
Kakariki	14292	4089600	15126.94	4	1.5	9528	2726400
Chickens	60000	6000000	0.00	16	2	30000	3000000
Princess of Wales parakeet	38900	11292000	51053.11	2	1.5	25933	7528000
Red pennant	30000	9000000		1	1	30000	9000000
Pheasant	80000	16000000		1	1	80000	16000000
Reeves pheasant	80000	16000000		1	1	80000	16000000
Silver pheasant	80000	16000000		1	1	80000	16000000

Table 12. Estimated average available enclosure floor area and available enclosure volume per either enclosure or individual for each type of bird kept in Scottish pet shops during summer 2003. Aver = average, vol = volume, indiv = individual, STD = Standard deviation, n= number of cages assessed. All area values in square cm, and all volume values in cubic cm. The bird types correspond to the names given by the pet shop themselves. Cases with question marks are not completely identified as far as species is concerned.

Table 12 suggests that in the case of birds the available floor area and the available volume seem to be quite different. This relationship can be seen in figures 34 and 35, which show that although the available floor area per bird does seem to decrease more or less proportionally with the size of the bird, this correlation is not that clear when we consider volume. Rosellas, lovebirds and some finches seem to have proportionally less available space than the other birds, probably because they hardly ever share the big aviaries of the big chain shops. It is arguable that although a regulatory system based on the availability of floor area may be adequate for ground dwelling vertebrates, it may not be for tree dwelling or flying ones. It is surprising then that the present pet shop regulations seem to ignore available volume for birds, but not for ground dwelling mammals. Perhaps this lack of consideration of volume in the regulations can explain why the correlation between body size and available volume is not as close as it is with floor area.

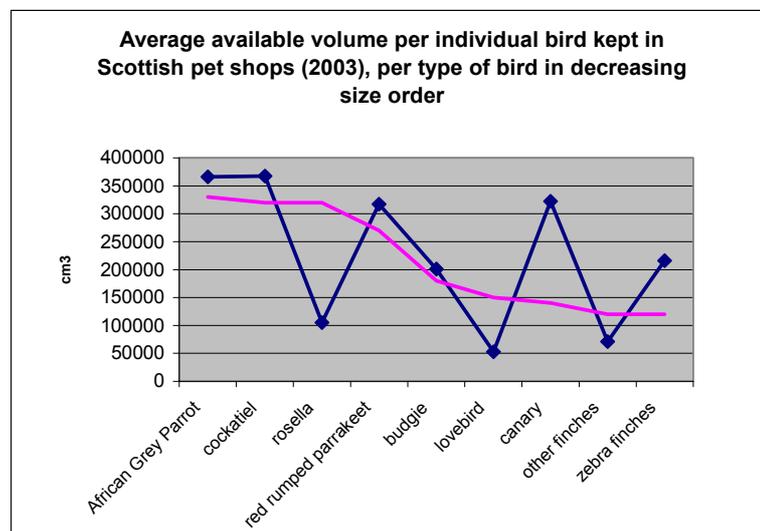


Figure 34. Average available volume per individual bird kept in Scottish pet shops during 2003, per type of bird ordered by size. In pink the estimated size reduction.

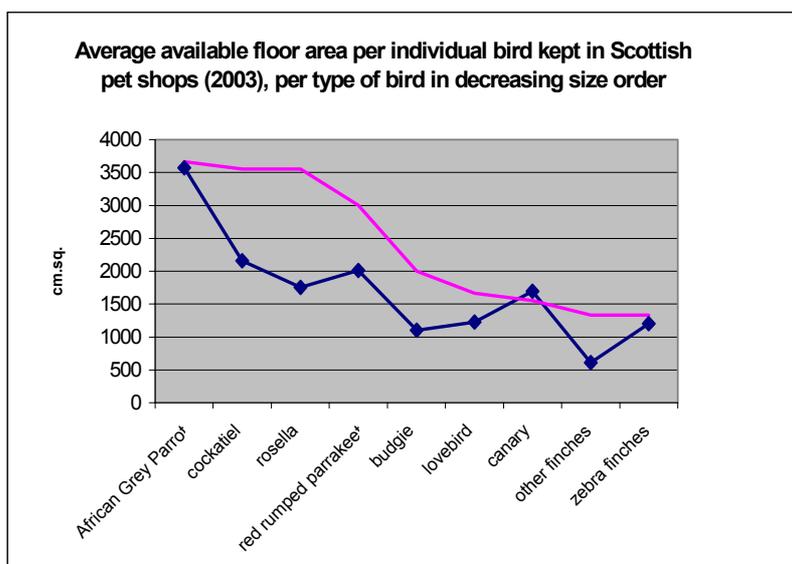


Figure 35. Average available floor area per individual bird kept in Scottish pet shops during 2003, per type of bird ordered by size. In pink the estimated size reduction.

If we study the case of sub-standard enclosures as far as size is concerned in birds (birds with much more less space than the average bird), we can see that at least 47% (n=1081) of the individual birds kept in Scottish pet shops have an available cage volume of less than a quarter of the average cage volume found in this investigation for all birds of the same type. These cases could be caused either by small enclosures or by overcrowding (figure 40), but as in the case of mammals the data suggest the second reason as more likely. As it can be seen in figure 36 there is also a certain correlation (perhaps a bit more linear) between the reduction of available volume and the number of individuals per enclosure.

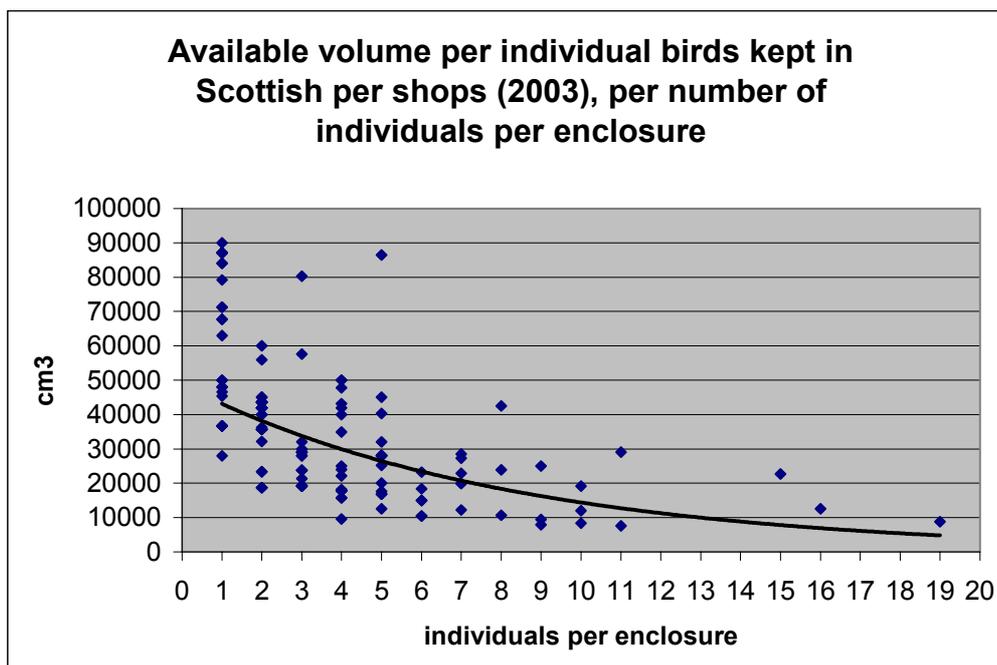


Figure 36. Available volume per individual bird kept in Scottish pet shops during 2003, per number of individuals per enclosure. These are only cases where the available volume is less than a quarter of the average volume, and therefore these are cases at risk of overcrowding. The line shows the regressed exponential function.

As in the case of mammals, most Scottish pet shops tend to economise in space by providing to their birds just the minimal space recommended. Figure 37 shows the example of budgerigars (figure 39), which despite ‘enjoying’ the big floor area of the occasional aviary, tend to be housed in enclosures just about bigger than the minimum recommended (and sometimes, as we have already seen, even smaller).

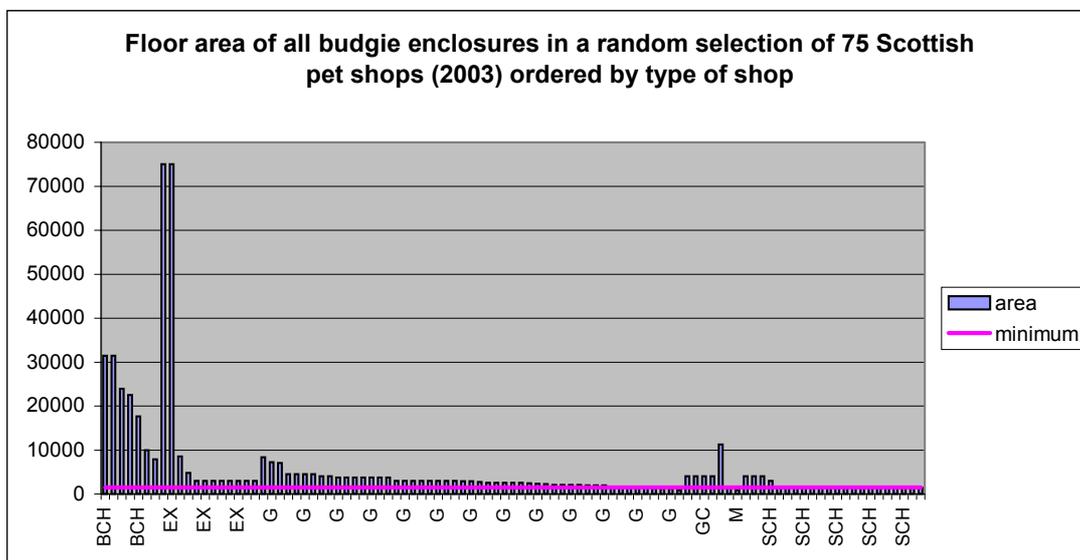


Figure 37. Floor area of all budgerigar enclosures seen in Scottish pet shops during this study (2003). Values in square cm. Pink line represent the recommended minimum floor area. A= Aquaria, BCH = Big chain, EX = Exotics, G = General, GC = Garden Centre, M = Minimal, SCH = Small chain.

If we analyse in more detail the 47% of birds that have less than a quarter of the available space than the average, we can try to assess how many have not even room to fully stretch their wings. To do so we could estimate the volume each type of bird needs when the wings are fully stretched, and we can do that by assuming that such volume would be equivalent to a sphere with the bird's wingspan as a diameter.

Using the minimal values found in bibliographical research on the wingspan of the birds in question (Ffrench, 1992; Fry, 1988; Higgins, 1999) the 'wingspan volume' (WV) of all the bird types that have representatives within the 47% mentioned earlier was calculated (table 13).

<u>Bird</u>	<u>Wingspan</u>	<u>W.V.</u>
Cockatiel	35	22449
Budgie	20	4189
Canary	15	1767
Finches	12	905
Kakariki	31	15599
Minah	35	22449
Prince of Wales parakeet	50	65450
Quail	15	1767
red-rumped parakeet	30	14137

Table 13. Minimal wingspan found (cm) through bibliographic research (Ffrench, 1992; Fry, 1988; Higgins, 1999) and corresponding 'Wingspan volume' (W.V., in cubic cm, see text) of the types of birds with cases of little available space in Scottish pet shops.

Taking in consideration cage dimensions, comparing the available volume for each individual bird with the WV, 1.5 x WV and 2 x WV, we can see that at least 6% of the birds kept in Scottish pet shops have a theoretical available space of less than twice the volume they occupy when flapping their wings fully stretched, 2% have an available space less than 1.5 times such volume, and 1% have an available space smaller than such volume (n= 1081). Two shops had 11 birds falling under the latter category, while five shops had 25 birds falling into the category before that.

However, the term 'theoretical' has been used in the previous paragraph because those percentages were calculated considering all available volume within each cage, but the reality is that if several birds flap their wings at the same time in an enclosure, they are not going to be placed in such a way they would fill all available space. The number and location of perches would determine where the birds are likely to be, so the real available volume is likely to be less than the actual cage volume. Considering that the calculations of the previous paragraph overestimate the available volume, it is surprising that cases that show insufficient space were found.

A better approximation of the actual available space could be obtained by making similar calculations using cage 'width' and wingspan, instead cage volume and wingspan volume. The results show that almost half (44%, n=1081) of the birds kept in Scottish pet shops are kept in enclosures with an available 'width' inferior or equal to the bird's wingspan, so if there is only one perch, and all birds in the cage would stretch their wings at the same

time (which is possible, in the case where they may be startled), they would touch each other or the sides of the cage.

The interpretation of these results would depend, though, on the distribution of perches in relation of the shape of the cage, since not all cages have their perches placed across the ‘width’ of the cage and many have them placed across the ‘depth’. If we analyse the 44% of birds mentioned earlier, and check which instances the perches are along the ‘depth’ of the cage instead the ‘width’, making the pertinent corrections still 44% (n=1081) of the birds kept in Scottish pet shops have an available perch length inferior or equal to the bird’s wingspan.

However, these cages may have several perches at different heights, so it is possible that in not all of these cases the animals would be under the same space restrictions. A further refining of the analysis could be achieved by checking the numbers of perches in each of the cages analysed earlier. In doing so, still 22% of the birds kept in Scottish pet shops are kept in enclosures with perches that do not provide enough space to allow all birds to fully stretch their wings without touching each other or the cage walls (table 14 and figure 40). This situation occurs in 39% (n=75) of the Scottish pet shops, and although it happens across all types of shops that normally keep birds, it happens in the majority of ‘exotics’ pet shops (67%, n=6). It is interesting to note that despite the presence of the biggest enclosures for birds, ‘Big chain’ shops still keep some birds in similar space restrictions than ‘General’ or ‘Small chain’ shops (figure 38).

Shop	Type	Bird	Wingspan	available perch length - WS	number of birds in cage
PET207	EX	African Grey Parrot	50	-5.0	2
MAR018	EX	African Grey Parrot	50	-50.0	1
CRE184	EX	African Grey Parrot	50	-40.0	1
MAR018	EX	Amazon parrot	50	-70.0	1
WOO038	G	Budgie	20	-8.6	7
PRE225	SCH	Budgie	20	-2.9	7
PET218	G	Budgie	20	-25.0	5
PET218	G	Budgie	20	-36.3	4
PET116	GC	Budgie	20	-22.9	7
PET116	GC	Budgie	20	-40.0	5
PAW100	G	Budgie	20	-16.0	5
NOA091	G	Budgie	20	0.0	6
LIB093	G	Budgie	20	0.0	4
J&M145	G	Budgie	20	0.0	7
GIR189	G	Budgie	20	-22.0	8
FOR051	G	Budgie	20	-8.0	4
DOG049	G	Budgie	20	-5.0	8
DOG049	G	Budgie	20	-8.6	7
DOG049	G	Budgie	20	-30.0	4
COU182	G	Budgie	20	-2.0	4
BIR007	EX	Budgie	20	-8.3	7
BIR007	EX	Budgie	20	-8.3	7
BIR007	EX	Budgie	20	-13.0	6
BIR007	EX	Budgie	20	-19.6	5
BIR007	EX	Budgie	20	-19.6	5
BIR007	EX	Budgie	20	-19.6	5
BIR007	EX	Budgie	20	-29.5	4
ALL078	M	Budgie	20	-6.3	4
ACO175	SCH	Budgie	20	-2.0	4
ACO128	SCH	Budgie	20	-2.0	4
ACO070	SCH	Budgie	20	-2.0	4
ACO069	SCH	Budgie	20	-2.0	4
MAR018	EX	Canary	15	-7.5	4
PET213	G	Cockatiel	35	-13.0	2
JUN015	G	Cockatiel	35	-1.0	5

CRE184	EX	Cockatiel	35	-55.0	4
MAR018	EX	Conure	35	-10.0	2
MAR018	EX	Ecclectus parrot	50	-34.0	1
WHI125	G	Finches	12	-18.0	8
PET213	G	Finches	12	-12.0	4
PET111	BCH	Finches	12	-10.9	7
MAR018	EX	Finches	12	-3.0	6
MAR018	EX	Finches	12	-3.0	6
MAR018	EX	Finches	12	-6.0	5
MAR018	EX	Green cheeked conure	35	-10.0	2
MAR018	EX	Grey ringneck parakeet	40	-2.0	2
PET260	G	Hahn's macaw	47	-53.0	1
PET207	EX	Parakeet?	35	-5.0	2
MAR018	EX	Red lored amazon	50	-34.0	1
MAR018	EX	Red lored amazon	50	-40.0	1
PET112	BCH	Red neck parakeet	35	-40.0	2
PET248	BCH	Red rump parakeet	38	-12.0	2
ACO172	SCH	Red rump parakeet	38	-6.0	2
MAR018	EX	Ringneck parakeets	40	-2.0	2
MAR018	EX	Rosella	35	-10.0	2
CRE184	EX	Sun conure	35	-33.0	1
PET113	BCH	Zebra finches	12	-4.0	10

Table 14. Cases of birds found in Scottish pet shops (2003) with less available perch length than that needed to allow simultaneous free full stretching of wings of all the birds in the enclosure. Wingspan values in cm. The fifth column shows the difference between the available perch length and the bird's wingspan. A= Aquaria, BCH = Big chain, EX = Exotics, G = General, GC = Garden Centre, M = Minimal, SCH = Small chain.

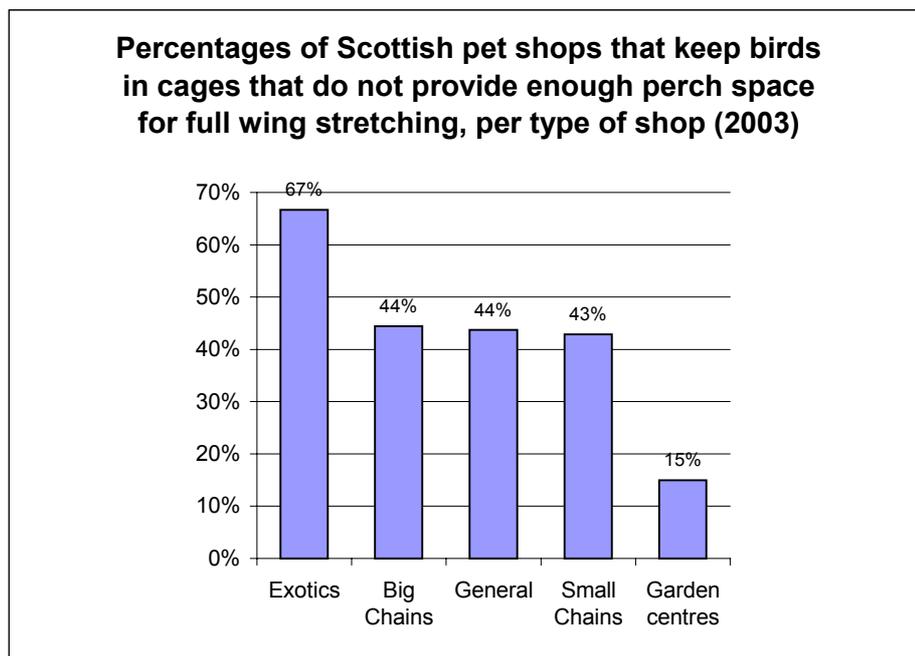


Figure 38. Percentages of Scottish pet shops that kept birds in 2003 in cages that do not provide enough perch space for full wing stretching (see text), per type of shop.



Figure 39. Example of a case of overcrowded budgerigar enclosure found in a Scottish pet shop in 2003



Figure 40. Two examples of small bird enclosures found in Scottish pet shops in 2003. On the left a case of overcrowded cockatiels; on the right a Mealy Amazon parrot in a very small cage.

Enclosure size for all animals

Including birds, mammals, some reptiles (figure 41) and cases that despite being within regulations they appear to be overcrowded, the majority (at least **60%**) of the Scottish pet shops showed at least a case where the enclosure/cage size appeared to be too small.



Figure 41. Example of a reptile (python) kept in too small enclosure found in a Scottish pet shop in 2003

HUMAN/ANIMAL INTERACTIONS

Animals in pet shops are destined to interact with human beings. From the shop assistants, to the shop customer, to finally all the members of the family/ies that are going to buy them. These interactions may take many forms, and may not always end up being beneficial for either the animals or the humans involved.

Customers interactions with pet shop animals

Despite the fact that pet shop regulations do not encourage customers and animals to interact, interactions do occur. These, although sometimes happen under the supervision of a pet shop assistant, at other times do not. During summer 2003 at least in 12% of the Scottish pet shops there were unsupervised interactions between customers and animals with potential detrimental consequences for the animals. These include tapping the enclosures glass, teasing the animals or simply touching them when they are not allowed to (table 15).

<u>Shop</u>	<u>Shop type</u>	<u>Interaction</u>
BUG008	EX	children tapping glass
BUG008	EX	two children upsetting reptiles
HAY144	G	child teasing birds
KIR055	G	customer touching rabbit
KIR055	G	customer touching rabbit through bars
LIB093	G	child tapping tank
NOR098	G	customer touching rabbit
PET111	BCH	customer touching rat
PET114	BCH	customer touching rabbit
PET116	GC	customer touching rabbit
MAR018	EX	customer talking too close to cockatoo

Table 15. Cases of customers of Scottish pet shops in 2003 interacting unsupervised with the shop's animals. A= Aquaria, BCH = Big chain, EX = Exotics, G = General, GC = Garden Centre, M = Minimal, SCH = Small chain.

On one occasion the investigator recorded how two children constantly shouted and harassed some lizards for almost 5 minutes, despite both the shop assistant and the adults accompanying the children were present and aware of the event. As a consequence of this harassment the lizards showed clear signs of distress (figure 42). It appears that such interactions, despite the obvious stress they produce, are interpreted by some as part of the experience of buying pets.



Figure 42. Example of a customer/animal interaction in a Scottish pet shop in 2003. In this case two children shouting and teasing some lizards for as long as five minutes, provoking a distress reaction in the reptiles. Note the sign asking not to tap the tanks.

If an animal is having difficulty in coping with its life because it is housed in an overcrowded or small enclosure, being teased or harassed by customers does not help. Some shops do have stand off barriers and other physical obstacles that prevent those interactions taking place, but the majority of shops do not.

There is also the issue of zoonotic risk. The World Health Organisation defines Zoonoses as "Those diseases and infections which are naturally transmitted between vertebrate animals and man". Both animals and the customers are at risk to pass diseases from one another.

There are more than 227 known species of organisms that produce zoonoses; of these at least 90 types are non-protozoa parasites, 29 types of protozoa parasites, 3 types fungi-like agents, 64 types of bacteria-like agents, and 42 types of virus like agents. All these probably represent a very small proportion of the agents that really can infect both human and other vertebrates. However, during this investigation 'zoonoses' were never mentioned, nor any pet shop drew attention to the subject. As can be seen below in the chapter about the advice given by shop assistants, it almost seems as if as far as the pet shop industry is concerned, zoonoses are irrelevant or unimportant.

However, diseases passed between humans and pet animals do occur. Pet birds are known to have transmitted the disease Psittacosis to humans. This disease, also known as Ornithosis or Chlamydiosis, is caused by the organism *Chlamydia psittaci*, and is carried by caged, wild and exotic birds. In humans it creates a flu-like illness which may lead to pneumonia and in severe cases endocarditis, hepatitis and death; the form of transmission is by inhaling dust or aerosol from faeces or nasal discharge from infected birds.

Hughes et al. 1997 describe seven hospital cases of psittacosis linked to pet shops. In the UK, Morrison et al. (1991) describe an outbreak of *Chlamydia* infection in Grampian believed to have been originated in a pet shop. Even today one Scottish local authority issues a leaflet talking about this disease to whoever applies for a shop licence. However, no information about it was ever seen by the investigator during the visits.

A study conducted by Dorresteijn et al (1998) in Holland showed that 40% of budgerigar breeders housed birds shedding the *Chlamydia psittaci* agent, and 27% of the pet shops studied were found to have birds carrying the agent for sale.

The other major zoonotic threat comes from reptiles in the form of Salmonellosis. The *Salmonella* bacterium can be transmitted indirectly via contaminated food and water but transmission may also be by direct contact. Infections have been recorded from exotic pets, and they can be lethal. Woodward et al. (1997) have found that in Canada reptile associated Salmonellosis is once again recognised as a resurgent disease. From 1993-95 there were more than 20,000 laboratory confirmed human cases of Salmonellosis, and the authors estimate that between 3% and 5% of these were caused by the exposure to pets. These are not isolate cases, because some studies trying to find the bacteria in reptiles have confirmed the vast diffusion of the germ among reptile pets (Orlandella et al., 1998).

The Chief Medical Officer for England warned in the year 2000 about the risk of contracting salmonella from pet snakes, lizards, terrapins and other reptiles. The warning was issued after laboratory figures showed a recent increase in the number of cases of *Salmonella* associated with exotic pets in children and infants.

Sometimes these zoonoses come into a pet shop through an individual animal and then are spread among other types of animals in the shop. There are reports of *Salmonella* being passed from reptiles to parrot-like birds (Ords et al. 1998) in pet shops. There are even zoonoses transmitted by fish to humans (Balaton et al., 1988).

The problem of zoonoses is also a very contemporary one. Robertson et al. (2000) state that *Giardia* and *Cryptosporidium* infections have increased over the past few decades, and immunocompromised people, in particular, must be aware of the potential risk of acquiring parasitic infections from pets.

The transmission of zoonotic disease is more likely when there is physical contact between humans and animals, but it also can be airborne. During the visits of this study two incidents that illustrate how can this happen were recorded. In the first one, a shop assistant proceeded to clean a reptile enclosure of excrements and left-overs by picking them up together with the sand where they had been deposited on (the enclosure substrate) and then filtering the sand back into the enclosure using a sieve (figure 43). The process produced a cloud of small particles of sand that left the enclosure and could have been inhaled by any passer by. This procedure was performed when a child was very close, therefore putting her at risk of contracting *Salmonella*, likely to be found in the lizards' faeces.

The local authority under which this particular shop was licensed had explicitly included the following licence condition in relation to both reptiles and birds that shows the importance of this issue:

"16.i As a safe working practice, all staff shall wear suitable respiratory equipment (i.e. dust mask), eye protection, gloves and a coverall at all times whilst cleaning out or handling reptiles. Bedding, faeces and other

materials which have been in contact with reptiles shall be disposed of in sealed plastic bags before placing in impervious containers with close fittings”



Figure 43. Example of zoonotic risk observed in a Scottish pet shop during 2003. On the left a shop assistant picking up reptile faeces and filtering the sand producing a dust cloud in the proximity of a child. On the right, the open bin (in a public place) where the faeces were thrown into minutes later.

The second case was found in a pet shop where a cockatiel flapped its wings vigorously, but due to the fact the enclosure was not big enough the tip of his wings touched a perch on either side, which in turn caused small feather particles floating in the air and leaving the enclosure (figure 44). Again, these particles could be inhaled by a passer by, with the subsequent risk of zoonoses (i.e. Psittacosis), asthma attack or allergic reaction by sensitive people.

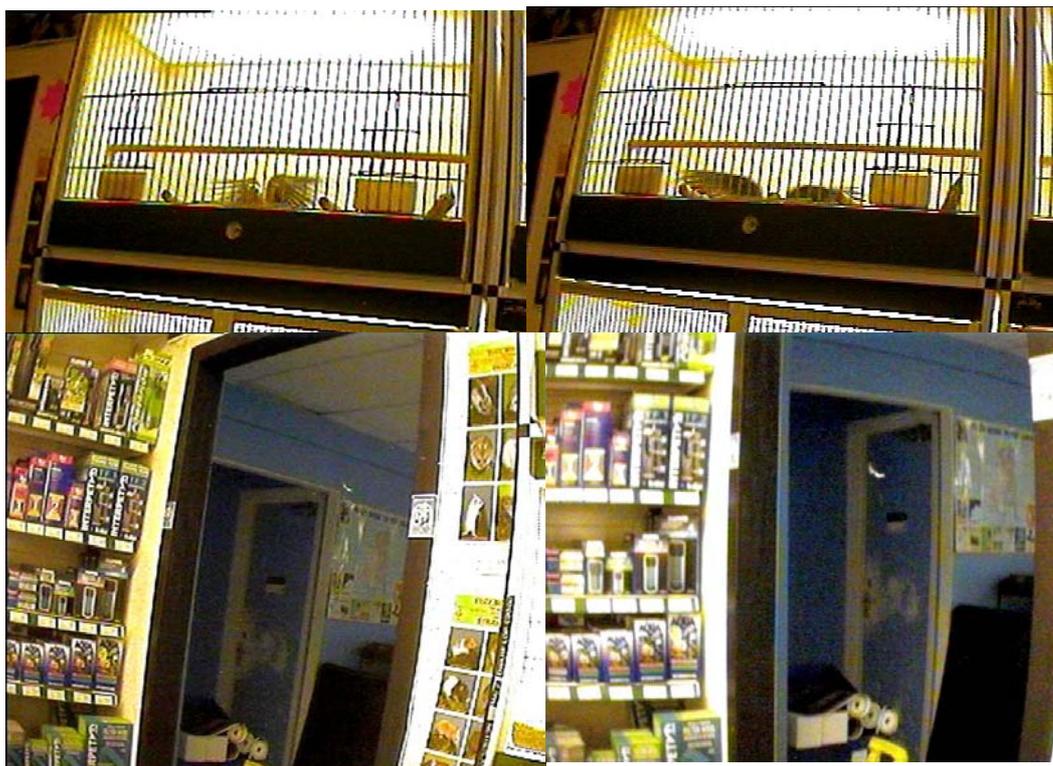


Figure 44. Example of zoonotic risk observed in a Scottish pet shop during 2003. On the top two sequences of a cockatiel flapping its wings touching the floor and perches in the process. On the bottom particles of dust and feathers floating on air as a result of the flapping.

The importance of these problems can be seen in the following licence condition issued by a particular Scottish local authority, in this case in reference to shops selling birds:

15 iv. Written procedures shall be produced for the isolation, treatment and management of birds with Psittacosis and other infections, contagious or zoonotic diseases

Shop assistants interactions with pet shop animals

It is the job of the pet shop assistant/owner to interact with the animals of his/her shop. However, some of the interactions, if done purely for the benefit of the customer at the expenses of the animals' rest/peace, may be considered, at the very least, gratuitous. During summer 2003 at least 16% (n=75) of the Scottish pet shops investigated were seen occasionally disturbing their animals' peace to show them to customers, without a real need for it.

These disruptions, which were interpreted by the investigator to be completely unnecessary for the development of the purchase, included tapping enclosures, taking animals out of their cages or otherwise waking them up when resting (table 16). These cases took place even when the investigator suggested that he did not want the animals be disturbed, and on some occasions he could clearly see that animals taken out from their enclosures did not want to be picked up.

Shop	Shop type	Assistant interaction
BUG008	EX	Holding bearded dragon out the cage
CRE184	EX	Assistant taking parrot out
GIR189	G	Assistant waking gerbil
JUN015	G	Assistant 2 taking chinchillas out to show children
NOA091	G	assistant stroking hamsters
PAL244	G	assistant taking guinea pig out
PAW099	G	assistant waking up gerbils
PET102	G	assistant waking hamsters
PET114	BCH	assistant awaking chipmunk
PET205	BCH	assistant picking up rat
PET211	G	assistant tapping gerbil cage
WHI125	G	assistant stroking parrot

Table 16. Cases of shop assistants of Scottish pet shops in 2003 interacting with the shop's animals in a way that may have disturbed their peace. A= Aquaria, BCH = Big chain, EX = Exotics, G = General, GC = Garden Centre, M = Minimal, SCH = Small chain.

ADVICE FROM SHOP ASSISTANTS

A particular aspect of this study is that the investigator was able to assess the shop assistants' standard of advice given to customers by engaging in conversation with them, and asking specific pre-designed questions. In the context of this chapter 'assistant' was anybody in the shop who attended the public and was capable of selling any animal to a customer. These include the shop owners, or any employee. When more than one person was available to talk, the investigator chose either the one that addressed him first, or the one that seemed less busy at the time. In most shops the investigator did not need to choose, since only one assistant was available.

In order to induce a positive conversation, to allow a wide range of issues to be discussed, and to prevent arising any suspicion that would have made the advice different from that normally given to customers, the investigator adopted a specific role that was the same in all shops: a non-local person that is attempting to buy a pet as a surprise present to his relatively new local girlfriend, despite not knowing much about pets and not having any idea about which pet to buy. By choosing this 'character' the investigator clearly became someone in a clear need for good advice, as well as someone with a high probability of ending up not looking after the pet properly (due to both inexperience and the 'impulse buying' attitude). This scenario allowed a proper standardised assessment of the quality of the advice given by shops, as oppose to the willingness to talk to the customer or the assumption that the customer 'already knows'.

The investigator could approach all the selected shops with this role, and although in some cases a full conversation was not achieved (and some predetermined questions could not be asked), in the majority of the shops the assistant willingly answered the investigator enquiries. Each visit ended with the investigator changing his mind about buying a pet that day as a surprise for his girlfriend, so although during the conversation he genuinely appeared to be a prospective buyer, no purchase or order was ever made.

The most expensive animal on offer in the shop

The investigator asked the shop assistants which were the most expensive animals he could buy at the shop (either directly that day or by order). The reason for asking this question was both to add an element of randomness as to which animals the investigator would enquire most about (the investigator would not know which animal it would be before visiting the shop) and to encourage a more detailed conversation due to the fact that a more lucrative commercial transaction could be in progress.

Although the reason to ask this question, as explained above, was mainly to generate a better response to other questions, the answers to this one provided some data that describes some aspects of the relative commercial value of the animals in the shops.

During the investigation 17 different types of animals turned out to be the most expensive animal in the shop, although in the majority of pet shops (67%), the most expensive animal were either rabbits, chinchillas, fish, parrots or budgies (figure 45). Therefore, the majority of the questions asked during the investigation were about these five types of animals. Rabbits were the animals most questions were asked about (in 17% of the shops it was the most expensive). As far as type of shops is concerned, the most expensive animal varied considerably (figure 45), which allowed a quite representative ranged of animals to enquire about. During the conversation with the assistants questions about other animals apart from the most expensive ones were also asked, but these answers were not taken into account in the analysis of this chapter.

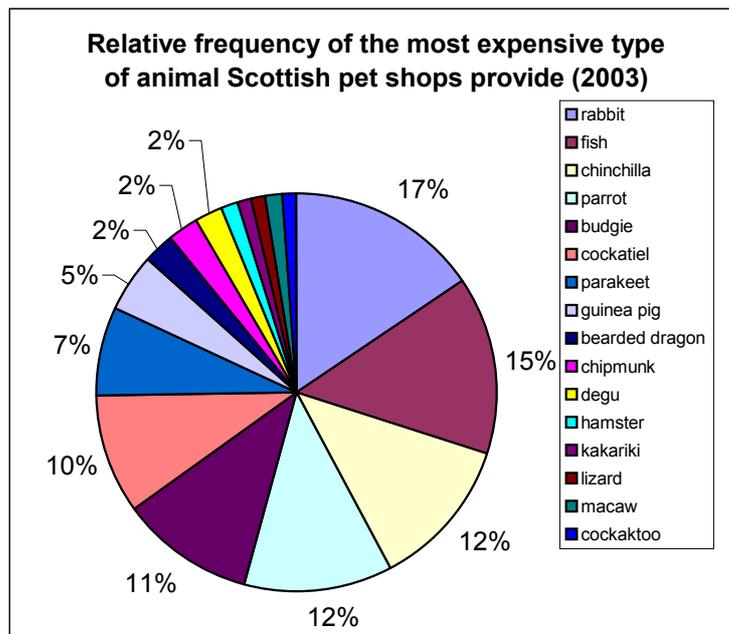


Figure 45. Relative frequency of the most expensive type of animal on sale in Scottish pet shops in Summer 2003. This also constitutes a relative distribution of the types of animals from which more advice was received during this study.

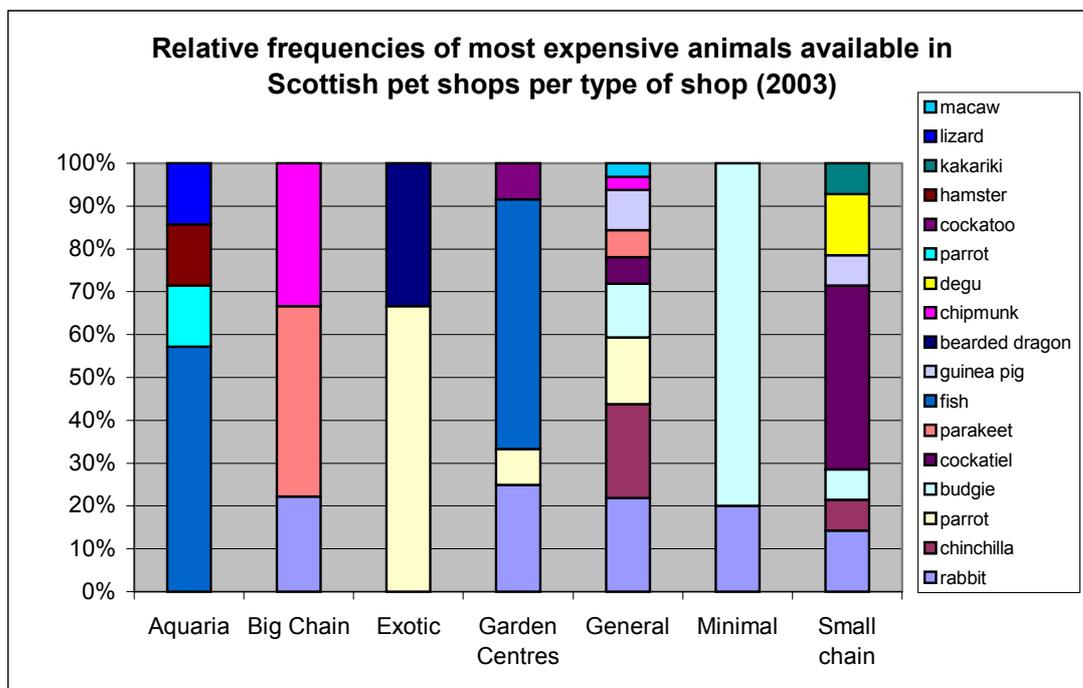


Figure 46. Relative frequency of the most expensive type of animals on sale in Scottish pet shops in Summer 2003, per type of shop. This also constitutes a relative distribution of the types of animals from which more advice was received during this study for each type of shop.

The accuracy of answers as well as the adequacy of the advice very much depended on the shop assistant experience and knowledge, and on the animals asked about. Although an analysis of how often shop assistants gave any sort of wrong advice could be interesting, this would be quite difficult because the definition of ‘wrong’ would vary depending on the question, the animal involved, and the context of the conversation (i.e. a general enquiry, or a more specific question about an animal in an advance stage of the purchasing process). Also, it is perfectly possible that the assistant that answered the question ‘had a bad day’, or was relatively new. For these reasons only issues from which a significantly big enough sample was obtained were analysed. This will allow evening up the differences created by the factors mentioned. Therefore, only conclusions that are general about standard advice – as opposed to point the finger at specific shops and specific assistants – were drawn.

In accordance with this, only issues with more than 5 answers from different shops were analysed. These would correspond to general questions about the rights and wrongs of ‘impulse buying’ (the ‘ask girlfriend question’, see below) or the problems the purchase may create to a child (the ‘child question’, see below), and also some general

enquiries on rabbits, parrots, fish, chinchillas, budgies, reptiles, cockatiels and parakeets, which are the most expensive animals with more than 5 answers (including answers given in visits to 'extra' shops).

The 'Child question'

A question regarding potential problems the purchase of a pet could cause both to a child and the animal concerned was asked to the assistants of the majority of shops visited (83%). The 13 selected shops that the question was not asked were mainly aquaria, where the relevance of the question regarding fish was lost.

This question was asked to assess the advice pet shops assistants give in relation to potential problems (as oppose to just selling their 'products' and therefore only focusing on positive issues), in this case suffered by a third person unrelated to the purchasing deal, but at most risk of any problem for being a minor likely to interact unsupervised with the pet, and having to share the same roof with it.

The question was phrased in the context of a ten year old child son of the investigator girlfriend (for whom the pet was supposed to be a surprise present) that lived in the same house where the pet would be. The question was asked in such a way that 'problems' meant for either the child or the animal.

Although the question was asked slightly differently on each shop depending of the circumstances of the conversation, an effort was made in all cases to phrase the question in the most similar way possible.

The most common form the question took – always in the context of purchasing an animal – was: *"My girlfriend has a ten year old son. Is there any problem at all with this?"*

On all occasions the question was asked immediately after the conversation was focused on one or various types of pets for sale as if they were potential purchases, so the answers were relative to the possibility of those particular pets ending up with the hypothetical child (hypothetical only to the investigator).

As explained above when there were different types of pets in the shop the investigator chose to ask about the most expensive available either in the shop itself or by order (after asking which one it was), and therefore the question regarding the 'child' referred to such type of animals (unless boarded as 'all the pets you have'), and not to any type the investigator might have been biased to choose.

In the case where the shop assistant did not answer the question, or the answer was not clear, the investigator either asked again or asked for clarification.

The answers given varied, but could be classified in the following categories:

- Simple NO (SN): this answer is a short negation which is interpreted as a definite 'no'; this includes forms like 'not really', 'no problem at all', 'it will be fine' or shaking the head.
- Simple Soft NO (SSN): this answer is a short negation which is interpreted as a less committed 'no'; this includes phrases like 'I do not think so', 'it should not be a problem' or 'not that I am aware of'.
- Elaborated NO (EN): any form of negation in which the answer is elaborated explaining either why there is no problem or describing positive aspects of the animal that confirms that it would be a good pet for the child, excluding any elaborated answer in which any problem is mentioned as conditional, or cases when a question about the child is asked back to the investigator.
- DO Not Know (DK): this answer indicates the person does not know whether there is any problem or not, and includes cases where no answer is given, or a digression to the answer is given instead.
- Short Absolute YES (SAY): in this answer a short mention of one or more problems is given, without elaborating on any of the problems. This includes answers that begin with 'no', and then a potential problem springs to the mind of the shop assistant who corrects him/herself.
- Short Conditional YES (SCY): in this answer a short mention of one or more problems is given with a condition when this may occur. This includes answers beginning with 'no, unless...', and answers in which the shop assistant asks questions to the investigation in order to assess if the 'child' will fall into any of such conditions (even if the final answer is 'no' after concluding the 'child' does not fall into such conditions).

- Elaborated Absolute YES (EAY): like SAY, but with an elaborated answer explaining about the problem, the reason for it or potential solutions.
- Elaborated Conditional YES (ECY): like SCY, but with an elaborated answer explaining about the problem, the reason for it or potential solutions.

There were no occurrences of the category DK, EAY and ECY in the answers, but they were still included in the analysis since their existence corresponds to expected answers.

The results show that when asked about any possible problem in getting a pet as a surprise to somebody that has a ten year old child the majority of the Scottish pet shops (55%, n=62) failed to mention any potential problems for either the animals or the child, despite on no occasion there was a problem-free scenario.

In regards the shop assistants that failed to mention any potential problem, more than a third (38%, n=34) stated a categorical 'No' to the question about potential problems, and almost half (47%, n=34) elaborated further on why there were no problems (figure 47).

From the ones that mentioned potential problems, more than a third (36%, n=28) failed to elaborate on the problem. This, compared with the values of the previous paragraph, indicates that assistants were more keen to talk about reasons to purchase the animals than reasons not to, which is consistent with a 'commercial' attitude, but which should not be the case in relation to sentient beings that do constitute a serious risk to the health of some people.

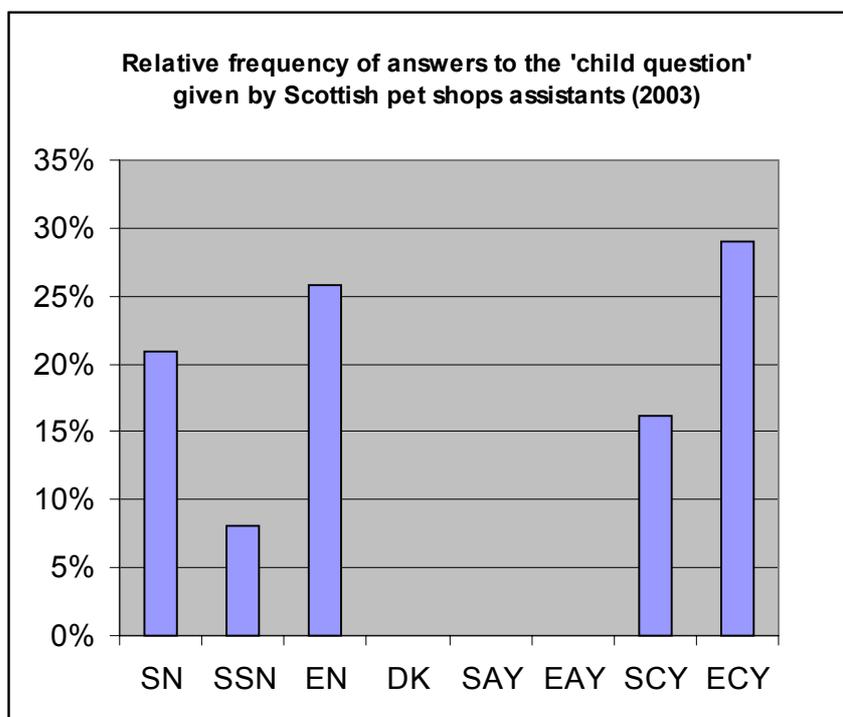


Figure 47. Relative frequency of answers to the 'child question' (see text) given by Scottish pet shops assistants in 2003. SN= Simple 'No', SSN= Simple Sot 'No', EN= Elaborated 'No', DK = 'Do not Know', SAY= Short Absolute 'Yes', EAY= Elaborated Absolute 'Yes', SCY= Short Conditional 'Yes', ECY= Elaborate Conditional 'Yes'.

When the assistants mentioned potential problems about the purchase of the pet in the 'child' scenario, 74% (n=34) of the problems mentioned were for the child, and 26% for the animal.

In reality, there are always potential problems in getting a pet for a child, especially if he/she is someone else's child, and the mother does not know about it. Many animals, including reptiles (Kelsey et al. 1997), bite; animals like hamsters or birds (Berto et al. 2002; Woodcock & Custovic, 1998) are an important indoor source of allergies and respiratory diseases; Asthma or Eczema are also problems that pets can make worse (Carrer et al. 2001; Schaefer, 1998); animals like reptiles may generate phobias (Fredickson et al. 1996). All this considering that the animals are healthy, because if there are not there is the additional issue of zoonoses which has already been discussed above. In addition to this there is also the fact that many animals are very sensitive to handling, so they can become easily stressed if having to share an environment with an irresponsible child that may not only be disturbing the animal on a regular basis, but, for example, may also be feeding it the wrong food.

As can be seen in table 17, theoretically, in all animals in the context of the ‘child’ question, at least seven possible general problems could realistically occur, in most of them eight and in a few even nine. However, the maximum number of problems ever mentioned by an assistant for a particular case was two, so even when 45% of the assistants mention some problems, all of them failed to mention most of the potential problems. Only three assistants (11%, n=28) mentioned two problems

	TOTAL TYPES	PROBLEMS FOR CHILD						PROBLEMS FOR ANIMAL			
		Allergy	Asthma	Zoonoses	phobia	Biting or kicking	escaping	Stress from handling	zoonoses	lack of attention	wrong food
rabbit	8	Y	Y	y		y		y	y	y	y
parrot	8	Y	Y	y	y	y		y		y	y
chinchilla	8	y	Y	y		y	y	y	y		y
cockatiel	8	y	Y	y		y	y	y		y	y
parakeet	9	y	Y	y	y	y	y	y		y	y
budgie	8	y	Y	y	y	y		y		y	y
guinea pig	8	y	Y	y		y		y	y	y	y
degu	8	y	Y	y		y	y	y	y		y
chipmunk	8	y	Y	y		y	y	y	y		y
macaw	8	y	Y	y	y	y		y		y	y
lizard	7	y		y	y	y	y	y			y
hamster	8	y	Y	y		y	y	y	y		y
guinea pig and rabbit	8	y	Y	y		y		y	y	y	y
Mammals	9	y	Y	y		y	y	y	y	y	y
Birds	8	y	Y	y	y	y	y	y			y
Reptiles	7	y		y	y	Y	y	y			y

Table 17. Occurrence of potential problems that could happen when buying a pet for a child, relative to different types of pets. Columns 3 to 8 show problems for the child and columns 9 to 12 show problems for the animal. In red, problems mentioned by any pet shop assistant during this investigation.

The most common problem mentioned was biting or kicking, mentioned by 50% of the assistants that said anything about any problem (n=28)

A problem particularly important is asthma. If the hypothetical child is asthmatic he should not live with any bird or mammal. However, only four assistants mentioned it (6% n=62). It could be said, though, that it would not be plausible that the investigator would buy an animal to his girlfriend knowing that her child is asthmatic (and this is why the problem was not mentioned), but in the scenario showed the investigator not only had no knowledge whatsoever on pets (and therefore he could well not know they constitute a problem for asthmatics) but he explained that his relationship with his girlfriend was relatively new (so he could not be aware of her child’s condition). The fact that four assistants did mention asthma suggest that in such scenario the problem was relevant enough.

Similarly, only three assistants (5%, n=62) mentioned allergies as a potential problem, which is a very low percentage indeed.

Most striking of all, though, is that only one assistant (2%, n=62) suggested zoonoses as a potential problem. This was an assistant working on a reptile shop that advised that the child should wash its hands after each contact with any reptile. That was the only time in any conversation during the visits to all establishments (including the extra visits) when somebody mentioned hand-washing, and on no occasion did anybody mention the name of the most common zoonotic diseases one can get from pets (Psittacosis, Salmonellosis, Leptospirosis, Toxoplasmosis, etc), nor even the term ‘disease’. This happened even when the investigator opened the conversation to the topic of zoonotic diseases through the ‘child’ question.

If we analyse which type of shops failed to give the right advice on this issue we can see that the answer ‘no’ to the ‘child question’ was found in all types of pet shops (figure 48). It should be said, though, that ‘Minimal’, ‘Aquaria’, ‘Exotics’ and ‘Garden centre’ all have very small samples, so the results of the figure should be interpreted as a relatively even representation of most types of shops

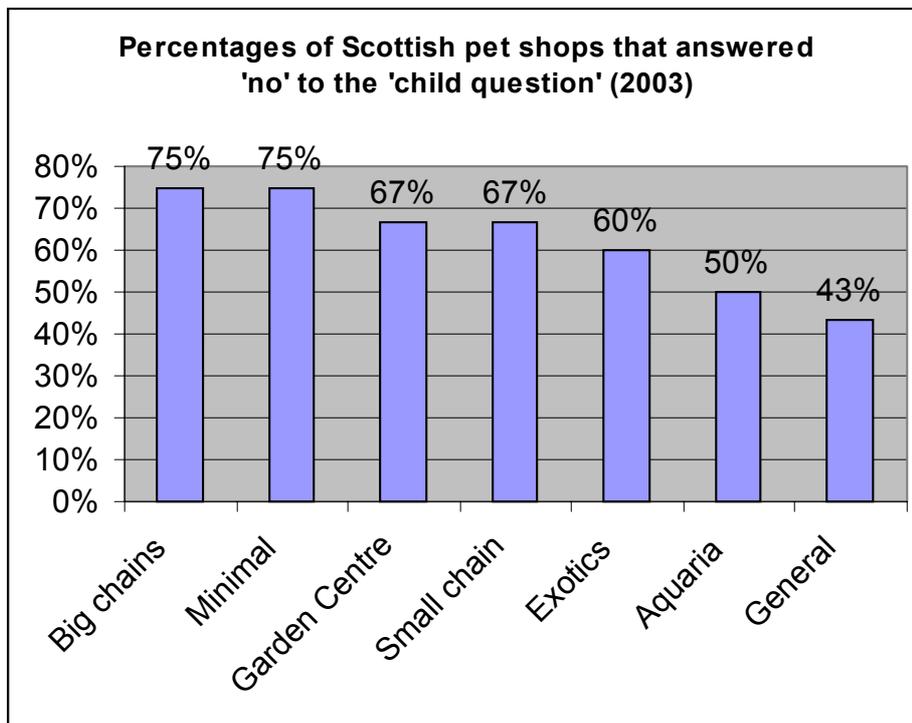


Figure 48. Percentage of Scottish pet shops assistants that answered 'no' to the 'child question' (see text) in 2003, per type of shop.

The 'Ask girlfriend question'

A question regarding whether or not it is advisable to buy a pet for someone else that does not know is going to get it was asked in the majority of shops visited (93%). Unforeseen circumstances of the investigation did not allow asking the question to 5 of the selected shops (two 'general', one 'exotics', one 'aquaria', and one 'minimal').

The question was phrased in the context of a surprise present for the investigator's girlfriend, who 'likes all pets in general' but she does not know she 'is going to get one'. This question was asked to assess the advice pet shops assistants gave in relation to 'impulse buying' of a pet for someone that may not want one. The question was asked in such a way that the investigator showed his doubts over such an impulse purchase, and as a result he was asking the advice of the shop assistant about it. Therefore, in a subtle way, the question was leading more towards advising to 'ask the girlfriend first' as oppose to keep the surprise, which allowed to get stronger conclusions if the results showed a significant number of inappropriate advice. When the assistant advised against the impulse buying without consulting the 'girlfriend', the investigator immediately agreed, changing his mind about the 'surprise' aspect of the purchase.

Although the question was asked slightly differently in each shop depending on the circumstances of the conversation, an effort was made to phrase the question in the most similar way possible in all cases. The most common form the question took was "*Do you think I should ask my girlfriend first?*"

On all occasions the question was asked after the conversation had already explored one or more potential purchases of specific pets the shop could provide, so the answers were relative to the possibility of those particular pets being bought as a surprise present.

When there were different types of pets in the shop, the investigator chose to ask about the most expensive pet available either in the shop itself or by order (after asking which one it was), and therefore the question regarding 'asking the girlfriend' referred to such type of animals (unless boarded as 'all the pets you have'), and not to any type the investigator might have been biased to choose.

Sometimes assistants replied back with the question 'does she likes birds?' – or similar questions relating specific pets subject of the conversation – and the answer of the investigator always was along the lines 'she likes all animals'. In all cases, then, it was made clearer to the shop assistant that the 'girlfriend' had not expressed any specific wish to have the pet the investigator was attempting to purchase.

The answers given varied, but could be classified within the following categories:

- Simple NO (SN): this answer is a short negation which is interpreted as a definite ‘no’; this includes forms like ‘I do not think so’, ‘not really’, ‘it will be fine’ or shaking the head.
- Elaborated NO (EN): any form of negation (implicit or explicit) in which the answer is elaborated, excluding any elaborated answer in which equal or more weight is given to the advice to ask first than the opposite, and including negative answers after a question about the girlfriend is asked back to the investigator before giving advice (like ‘does she likes animals?’).
- DO Not Know (DK): this answer indicates the person does not know (or does not want to say) whether it is advisable to ask first or not, and includes cases where no answer is given, a digression of the answer is given instead, a neutral advice is given (like trying to find out first her favourite pet without telling her the intention to buy it) or answers refusing to give advice like ‘it is up to you’. This answer also includes cases when the shop assistant eventually made up his/her mind after the investigator suggested an answer due to the lack of specific advice.
- Short Absolute YES (SAY): in this answer a prompted ‘yes’ is given in any of its forms, without elaborating on any reason why. This includes answers like ‘definitively yes’, ‘certainly yes’, and similar strong affirmations.
- Short Hesitated YES (SHY): in this answer a ‘yes’ is given after hesitation. This excludes answers that, after a considerable pause, take the form ‘definitively yes’, ‘certainly yes’ or similar strong affirmations, and includes short answers after the assistant initially replied back to the investigator with a question about the girlfriend (like ‘does she like animals?’).
- Elaborated Absolute YES (EAY): like SAY, but with an elaborated answer explaining why, or to emphasise the affirmation.
- Elaborated Hesitated YES (EHY): like SHY, but with an elaborated answer explaining why, or to emphasise the affirmation, including answers beginning with ‘yes, unless...’ and ending advising about asking first before the investigator suggested that this may be the better course of action, and also including elaborated answers after the assistant initially replied asking back to the investigator with a question about the girlfriend (like ‘does she like animals?’), or comments answering positively the question before it was asked (when the assistant realises the investigator is ‘impulse buying’).

During summer 2003 the majority (60%, n=70) of the Scottish pet shop assistants answered ‘yes’ to the question of asking the girlfriend first before buying a pet. However, due to the fact the question was slightly leading towards the ‘yes’ answer (the actual fact the investigator asked for advice suggested a possible problem with the ‘surprise’ purchase plan), and that in all cases involving any animal the answer should always be an unequivocal ‘yes’, it is surprising that a percentage as high as 40% failed to give the right advice (figure 49).

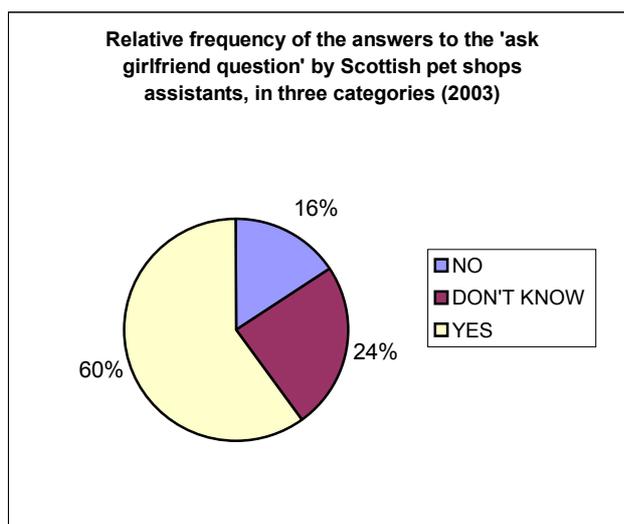


Figure 49. Relative frequency of the answers to the ‘ask girlfriend question’ by Scottish pet shop assistants, in three categories (see text).

Even more, if we separate the cases where the answer was a prompted absolute ‘yes’ from all the rest (including the ones that the assistant hesitated in responding ‘yes’), then the majority of pet shop assistants (51%, n=70) failed to answer with an unequivocal ‘yes’ to the question (figure 50).

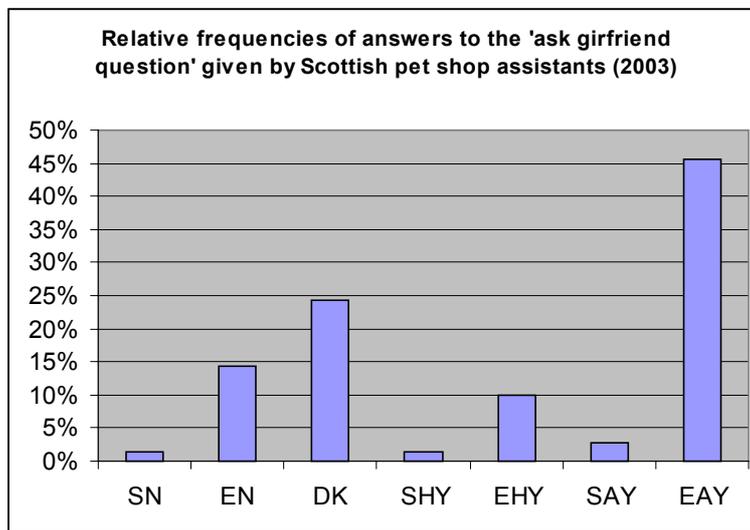


Figure 507. Relative frequency of answers to the 'ask girlfriend question' (see text) given by Scottish pet shops assistants in 2003. SN= Simple 'No', SSN= Simple Sot 'No', EN= Elaborated 'No', DK = 'Do not Know', SAY= Short Absolute 'Yes', EAY= Elaborated Absolute 'Yes', SHY= Short Hesitated 'Yes', EHY= Elaborate Hesitated 'Yes'.

Incidentally, the 'right advice' was given to the investigator on a few occasions, which proves that this advice is perfectly compatible with the business of running a pet shop, as oppose to an opinion from 'outside' the pet shop industry somehow disconnected with the realities of the business. Some of the good advice given on this issue took the form of insisting several times in telling the girlfriend first, suggesting it before the investigator asked the question (on three occasions), or phrases like *"I would never give anybody a pet as a surprise"* or *"think about it seriously before buying a pet; never buy an animal without telling the person first"*. It is surprising that, despite the common sense aspect of the issue, and the very strong indications for some of the comments that the surprise present scenario is clearly wrong, many pet shops failed to address it properly.

The more frequent type of answer was an elaborated absolute 'yes', but the second most common was the 'I do not know' category with almost a quarter of the answers, which probably reflect the conflicts the assistant had between attempting to secure the sell and giving the right advice. Most alarming, though, is that 15% (n=70) of the assistants suggested that is better not to tell the person that is going to get the pet first, and most of them elaborated on the answer.

Some of the reasons given for not telling the girlfriend first follow: "No problem as long as the girlfriend is not asthmatic"; "it is not like buying a big dog"; "the surprise will be spoiled"; "if she likes animals there is no need to tell her"; "many women buy these type of animals".

If we analyse which type of shops gave most wrong advice, we can see that with the exception of 'Big chains' and 'Garden centres', the rest all have cases of wrong advice (figure 51). It should be said, though, that 'Minimal', 'Aquaria', 'Exotics' and 'Garden centre' all have very small samples, so the results of the table should be interpreted as a relatively even representation of most types of shops, with the exception of 'Big chains'.

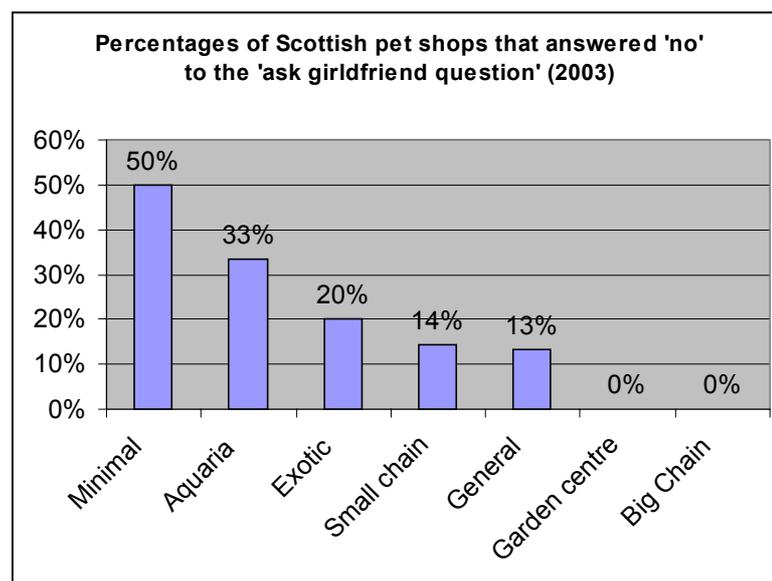


Figure 51. Percentage of Scottish pet shops that answer 'no' to the 'ask girlfriend first question' in 2003 (see text).

Questions about specific animals

A selection of 'questionable advice' given during the course of the conversations on the animals the investigator enquired about follows:

- UV light

Terrestrial reptiles (lizards or snakes) need a source of UV light (Laig et al. 2001), which in a captive scenario comes in the form of fluorescent UV bulbs that have to be replaced every six months because they lose the UV radiation gradually. There is some discussion as to how often these bulbs should be replaced in the case of snakes, but there is a consensus that six months is appropriate for most of the other terrestrial reptiles.

When enquiring about these reptiles the majority of the pet shop assistants (89%, n=9) failed to suggest that a replacement UV light was needed every six months. Even more, the majority of shops failed to mention UV lights at all when the question 'would I need to replace anything?' in relation to terrestrial reptiles was asked. In fact only one out of nine shops suggested the 6 months replacement.

- Sand box

Some mammals like chinchillas and degus, for the nature of their fur, need a sand box or dish to bathe, since they do not clean themselves with water but with sand.

When the investigator enquired about what else apart from the cage would he need to buy for a chinchilla or degu, the majority of pet shop assistants (62%, n=13) failed to mention the sand box/dish.

- Fur slip

Chinchilla fur, although dense, is not tightly attached and this serves as a defence mechanism to predator attack. If the fur is grasped roughly during handling, or if the chinchilla is frightened too often, the condition called 'fur slip' may result in a partially bald animal.

In 91% (n=11) of the conversations about purchasing a chinchilla, the pet shop assistants failed to mention this condition, even when the issue about being handled by a child arose. Only one assistant mentioned it.

- Single or pair animals

In some animals, due to their social nature, it is generally accepted that it is better to avoid keeping them alone, so if the buyer does not already keep any, buying at least a pair is advisable. This is the case of very social birds like budgies, cockatiels or parakeets, and also mammals like guinea pigs, degus and gerbils.

The Pets at Home leaflet about guinea pigs states "*guinea pigs are social animals and will be happiest with another guinea pig as company*".

The Petworld leaflet about degus states "*degus are social animals and enjoy each others' company. It is not a good idea to keep one degu alone and they should be kept in pairs or small family groups*".

Budgies live in groups of 20 to 40 and sometimes as many as 60 birds in the wild. However, there is no agreement among experts about the advice of keeping them at least in pairs, which is quite surprising. The disagreement, though, seems not necessarily based on what is best for the bird, but on what is best for its owner. The general advice on this matter is that budgies can be kept as a single bird or as a pair, but if the owner wants a really tame bird, it is usually better to get a single bird. The reason for this is that while a pair of birds bond with each other, a single bird bonds with the carer. Most would agree, though, that a bird that is kept alone needs the owner to spend a significant amount of time interacting with it on a daily basis.

The same said about budgies could be said about cockatiels, and to a lesser extent most of the smaller species of parakeets.

When we analyse the advice given by pet shop assistants when replying to the 'company question', and if we class together all the cases of highly social species from which a detailed conversation took place (to

get a big enough sample), the majority of the shop assistants (70% n=20) advised that getting a single individual is fine, while 30% advised for at least a pair (table 17).

	Pair	Single
Guinea pig	2	1
Parakeet	2	4
Budgie	1	8
Degu	1	1
TOTAL	6	14
	30%	70%

Table 17. Number of pet shop assistants in Scottish pet shops that advised on the issue of buying very social species as ‘singles’ or in ‘pairs’, per type of answer (see text).

However, as there is no agreement among experts, and most assistants advised getting a pair of guinea pigs against ‘single’, we should not draw any conclusion on this matter other than there is a substantial difference of opinion.

- Other ‘inappropriate’ advice

Occasionally some pet shop assistant would give advice (not mentioned in other parts of this report) that stood out for its apparent lack of soundness. Examples of these follow:

- Advising that the cage for a big parrot should be just big enough for the bird.
- Failing to suggest that, for a beginner that never looked after any reptile, starting with anything bigger than a leopard gecko is not advisable.
- Advice that the investigator “should not bother” to check if there is enough room in his girlfriend’s house for a parrot cage.
- Advising that a parrot can be fed with meat on the bone, pizza, pasta and everything we eat

Overview on pet shop assistants advice

If we look at all the advice mentioned so far in this chapter and we try to get a general picture of how many shops gave what could be described as ‘bad advice’ (assuming that the omission of an important piece of advice is ‘bad’ advice), we can see that the majority (at least 71% n=75) of Scottish pet shops gave bad advice to customers during Summer 2003 (table 18). Not answering with an unequivocal ‘yes’ to the ‘ask girlfriend question’ and not answering ‘yes’ to the ‘child question’ was considered as ‘bad’ advice.

<u>Shop</u>	<u>Shop type</u>	<u>bad advice</u>
ACO041	SCH	Ask girlfriend question
ACO041	SCH	Child question
ACO066	SCH	Ask girlfriend question
ACO066	SCH	Child question
ACO067	SCH	Ask girlfriend question
ACO067	SCH	Company question
ACO068	SCH	Child question
ACO069	SCH	Ask girlfriend question
ACO069	SCH	Child question
ACO070	SCH	Ask girlfriend question
ACO070	SCH	Fur slip ‘advice’
ACO070	SCH	Sand bath advice
ACO075	SCH	Ask girlfriend question
ACO075	SCH	Child question
ACO128	SCH	Ask girlfriend question
ACO172	SCH	Ask girlfriend question
ACO172	SCH	Child question
ACO172	SCH	Sand bath advice
ACO175	SCH	Ask girlfriend question

ACO175	SCH	Child question
AIR176	A	Ask girlfriend question
AIR176	A	Child question
ALL078	M	Child question
ANI003	G	Ask girlfriend question
ANI003	G	Child question
AQU081	A	Ask girlfriend question
BIR007	EX	Child question
COR137	A	Ask girlfriend question
CRE184	EX	Ask girlfriend question
CRE184	EX	Child question
CRE184	EX	Other
CRE263	M	Ask girlfriend question
DAP186	G	Ask girlfriend question
DAP186	G	Child question
DAP186	G	Company question
DOB138	GC	Ask girlfriend question
DOG049	G	Ask girlfriend question
FIS012	A	Ask girlfriend question
FIS012	A	Other
FIS012	A	UV light advice
FOR051	G	Ask girlfriend question
GIR189	G	Child question
J&M145	G	Ask girlfriend question
J&M145	G	Child question
J&M145	G	Company question
JUN015	G	Ask girlfriend question
JUN015	G	Child question
JUN015	G	Fur slip 'advice'
JUN015	G	UV light advice
KIN092	A	Ask girlfriend question
KIR055	G	Child question
LIB093	G	Fur slip 'advice'
MOR096	G	Company question
NOR098	G	Child question
PAW099	G	Child question
PAW100	G	Fur slip 'advice'
PAW100	G	Sand bath advice
PET061	BCH	Ask girlfriend question
PET102	G	Ask girlfriend question
PET111	BCH	Child question
PET111	BCH	Fur slip 'advice'
PET111	BCH	Sand bath advice
PET112	BCH	Ask girlfriend question
PET112	BCH	Child question
PET114	BCH	Child question
PET115	G	Fur slip 'advice'
PET115	G	Sand bath advice
PET162	BCH	Ask girlfriend question
PET162	BCH	Child question
PET205	BCH	Child question
PET207	EX	Child question
PET207	EX	UV light advice
PET208	M	Ask girlfriend question
PET208	M	Child question

PET209	M	Ask girlfriend question
PET209	M	Child question
PET209	M	Company question
PET210	G	Other
PET211	G	Ask girlfriend question
PET211	G	Fur slip 'advice'
PET211	G	Sand bath advice
PET212	G	Child question
PET218	G	Ask girlfriend question
PET218	G	Child question
PET218	G	Company question
PET248	BCH	Ask girlfriend question
PET248	BCH	Child question
PRE225	SCH	Ask girlfriend question
PRE225	SCH	Child question
SMA230	G	Ask girlfriend question
SMA230	G	Child question
WHI125	G	Ask girlfriend question
WHI125	G	Child question
WHI125	G	Other
WOO018	G	Ask girlfriend question
WOO018	G	Child question

Table 18. Main cases of 'bad advice' (see text) given to customers by Scottish pet shop assistants during 2003. A= Aquaria, BCH = Big chain, EX = Exotics, G = General, GC = Garden Centre, M = Minimal, SCH = Small chain

It could be said that if questions had been systematically asked to young part-time shop assistants working at weekends the occurrence of 'bad advice' would be higher than normal. Although this might be the case, this does not apply to this investigation, since most visits were made during weekdays, and no visit was made on a Bank Holiday or on a Sunday, reducing the chance to encounter part time inexperienced staff.

This general tendency of 'bad advice' can be seen across all types of shops (figure 52), where at least half of the shops of each type gave 'bad advice' to the investigator. It is interesting to note that both big and small chain shops show a similar high percentage of these cases, while 'exotic' shops show the lowest, perhaps because the nature of their specialisation lead them to require more expertise, which in turn increases the chance of better advice.



Figure 52. Percentage of Scottish pet shops that gave 'bad advice' (see text) to customers in 2003, per type of shop.

COMPLIANCE WITH REGULATION AND GUIDANCE

The Pet Animals Act 1951

In Scotland pet shops are regulated under the Pets Animals Act 1951 through a licensing system administered by the local authorities. The Act, and its amendments, deal with the following main three points:

- The Act establishes a regime of local authority licensing for premises from which the business of selling animals as pets is carried out and premises where animals are kept with a view to their being sold in the course of such a business.
- The Act prohibits the selling of animals as pets in public places and from market stalls
- The Act prohibits the selling of animals as pets to children under the age of 12 years.

The Act also defines what is a pet shop (see definition in the introduction chapter above), specifies that each licence expires at the end of each calendar year, authorises local authorities to inspect pet shops, gives local authorities the power of seeking to prosecute those committing offences under the Act, specifies what is an offence, and allows local authorities to issue licence conditions to the applicants of a pet shop licence.

Therefore, all pet shops in Scotland that sell live vertebrates require a Pet Animals licence, and it is an offence to sell animals in a pet shop without it. The specific points in the Act that state this follow:

- (1) *“No person shall keep a pet shop except under the authority of a licence granted in accordance with the provisions of this Act.*
- (7) *Any person who contravenes the provisions of subsection (1) of this section shall be guilty of an offence; and if any condition subject to which a licence is granted in accordance with the provisions of this Act is contravened or not complied with the person to whom the licence was granted shall be guilty of an offence.* “

There were only two main issues that could be checked in this investigation in respect of compliance with the Pet Animals Act 1951: whether or not all pet shops are licensed in Scotland, or if the licence conditions specified by each local authority for each shop have been complied with.

After enquiring directly to all the pertinent licensing authorities (by either phone, fax or mail), regarding the existence or not of a valid pet shop licence for the selected shops under their jurisdiction, information for 76% of the shops (n=75) was received at the time of this report’s publication. From the information received it can be concluded that at least 9% of the Scottish pet shops are illegally open because of the failure to hold a valid pet shop licence. This percentage could increase to 12%, considering that a response from the local authorities that cover 24% of the selected shops has not been received as yet.

From the eight cases identified without a licence (all establishments that offer live vertebrates for sale) after asking the local authorities, 63% had an expired licence at the time of the visit, and the rest appear never to have had a pet shop licence (table 19).

<u>Shop</u>	<u>Town</u>	<u>Local authority</u>	<u>Licence status</u>
HAY144	Glasgow	Glasgow City Council	Expired
M&R195	Glasgow	Glasgow City Council	Expired
SMA230	Glasgow	Glasgow City Council	Not held
PRE225	Irvine	North Ayrshire Council	Expired
PRE226	Kilwinning	North Ayrshire Council	Expired
PET208	Ayr	South Ayrshire Council	Not held
HIG239	Carrbridge	The Highland Council	Not held

Table 19. Shops visited during this investigation that allegedly had not a valid pet shop licence at the time of the visit despite needing one. The information in the last column was provided directly from the pertinent local authorities.

One of these appear not to be a shop itself but a private residence, but due to the fact exotic animals were offered on sale from the private address to customers that made enquires over the phone – after having seen an advert with the address in question in the Yellow Pages under the section ‘pet shops’ – it was considered that a Pet shop licence was required. During a telephone conversation the investigator had with the individual concerned a proposal to sell reptiles was made.

As far as checking for compliance of the licence conditions is concerned, in order to do so it is necessary to determine what are the licence conditions specified in each case. As mentioned previously, the Act authorises local authorities to issue licence conditions. It also guides them in which direction the main conditions should go:

(2) *“In determining whether to grant a licence for the keeping of a pet shop by any person at any premises, a local authority shall in particular (but without prejudice to their discretion to withhold a licence on other grounds) have regard to the need for securing-*

(a) that animals will at all times be kept in accommodation suitable as respects size, temperature, lighting, ventilation and cleanliness;

(b) that animals will be adequately supplied with suitable food and drink and (so far as necessary) visited at suitable intervals;

(c) that animals, being mammals, will not be sold at too early an age;

(d) that all reasonable precautions will be taken to prevent the spread among animals of infectious diseases;

(e) that appropriate steps will be taken in case of fire or other emergency;

and shall specify such conditions in the licence, if granted by them, as appear to the local authority necessary or expedient in the particular case for securing all or any of the objects specified in paragraphs (a) to (e) of this subsection. “

However, as can be seen in the wording, the Act is not very precise in specifying which kind of practical conditions are adequate. Therefore, in 1998, after consulting the British Veterinary Association, the Chartered Institution of Environment Health, and the pet shop industry itself (through the Pet Care Trust and the Ornamental Aquatic Trade Association Limited), the British Local Government Association (LGA) published a set of ‘standard’ licence conditions so each local authority could use them as a model. This publication, ‘The Pet Animals Act 1951 Model Standards for Pet Shop Licence Conditions’, is applicable to Scotland after devolution because the law remains the same and the Scottish local government association has not published as yet alternative Standards.

The ‘LGA Standards’ were used as the source of expert ‘recommendations’, since they were created by vets, local authorities and the pet shop industry. However, if a particular shop does not follow a particular condition stipulated in the ‘standards’ it does not mean that the shop is committing an offence. It will all depend on whether or not the local authority under which the shop is licensed has added that particular condition to the conditions attached to the licence. The assumption could be, though, that due to the fact the LGA Standards were created by the local authorities and the shops themselves, most local authorities would adhere to the ‘Standards’, so if they issue different conditions these would be additional to the already specified in the ‘Standards’. However, we did not make such an assumption, so we studied both cases separately.

In the analysis, therefore, a distinction should be made between the compliance of the LGA Standards and the compliance to the specific licence conditions each local authority issues. The former should be considered compliance to guidance and recommendation, while the second should be considered compliance to regulations.

The ‘LGA Standards’

‘The Pet Animals Act 1951 Model Standards for Pet Shop Licence Conditions’ has over 70 points, the compliance of many of which is difficult to assess with a study like this one. However, some of the points could be assessed, and these are discussed in this chapter (each point is preceded by the original section number in the ‘Standards’, and begins with a direct quote).

1.0 Licence Display

1.1 The licence, or a copy of the licence, should be suitably displayed to the public in a prominent position

The investigator could only see the pet shop licence displayed in 15% (n=75) of the selected shops, and also in 15% of all the shops visited (n=93).

From the 14 cases where a copy of the licence was seen, in only two the details of the licence were readable, while the rest were not, either because only the title of the licence was displayed (one case), or the licence was too far away from the customers (normally too high) so it was not possible to read its contents. Therefore, only 2% of the shop had a licence ‘suitably displayed to the public’.

2.0 Accommodation

2.1 *Animals must at all times be kept in accommodation and environment suitable to their species with respect to situation, size, temperature, lighting, ventilation and cleanliness and not exposed to draughts. All accommodation must be kept in good repair.*

Size

As seen in the chapter about enclosure size, 43% of the individual mammals kept in the Scottish shops are in enclosures that will become smaller than the minimum specified by regulations in the course of the animal's natural growth, and 13% of the pet shops had cases of birds probably being kept in cages too small in relation to the recommended sizes. Taking in consideration birds, mammals, some reptiles and cases that despite being within regulations there still appears to be overcrowding, the majority (at least 60%) of the Scottish pet shops showed at least one case where the enclosure/cage size appeared to be too small.

Situation

During summer 2003 42% (n=85) of the Scottish pet shops had their animal enclosures situated in such a way that either forced the customer to be physically too close to them or the enclosures could be too easily surrounded by too many customers. This could provoke a fear response to the animals due to the potential intimidating affect (table 20). All types of shops had these cases, but 'Aquaria' and 'General' shops had the majority of their shops in this situation, while 'Small chain', 'Minimal' and 'Big chain' shops had the minority (figure 53).

The definitions used to study this issue follow:

'Surrounded':

an animal enclosure that can be approached and touched by the customers on three or more of its sides at the same time (including the top side).

'Close':

the design of the shop forces customers to be less than a metre to some of the enclosures.

During summer 2003 27% (n=75) of the Scottish pet shops had animals kept in enclosures that could be approached and touched on three or more of their sides.

During summer 2003 28% (n=75) of the Scottish pet shops design forced customers in the shop to be closer than a metre to some of the animals. Only 5% of the pet shops had stand-off fences or other type of barriers that would prevent customers getting too close to some of the animals.

SHOP	Type	close	surrounded	Animal surrounded	Barriers
ACO067	SCH	y			
ACO075	SCH		y	Cockatoo	
AIR176	A	y	y	Rabbit	
ANI003	G	y	y	Guinea pig	
BIR007	EX				Y
BUG008	EX	y			
COU182	G				y
FIS012	A	y			
GIR189	G		y	Parrot, Guinea pig	
HAY144	G	y	y	Parrot	
J&M145	G		y	Gerbil	
JUN015	G		y	Guinea pig, Budgies	
KIN092	A	y			
KIR055	G	y	y	Parrot, rabbit	
LIB093	G		y	Guinea pig	

M&R195	A	y			
MAR018	EX	y	y	Parrots, Minah, Finches	
MOR096	G		y	Guinea pig, gerbil	
NOA091	G	y	y	Rabbit, Degu	
PAL020	G		y	Hamster	
PAL244	G	y			
PAW099	G		y	Rabbit, Guinea pig	
PAW100	G	y			
PET061	BCH				y
PET114	BCH		y	Chipmunk	
PET162	BCH				y
PET207	EX	y			
PET209	M		y	Budgies	
PET210	G	y			
PET211	G		y	Guinea pig	
PET213	G	y			
PET216	G	y			
PRE225	SCH	y			
SMA230	G	y	y	Chipmunk	
WAT036	A	y	y	Fish	
WOO018	G	y	Y	Rabbit, Macaw, Budgie, Guinea pig, Parakeet	
CAR029-G	GC		Y	Rabbit, budgie	
CUP012-G	GC		Y	Cockatiel	
THE028-G	GC		Y	Budgie	
HEA008-G	GC	y			

Table 20. Cases found in Scottish pet shops in 2003 of enclosures incorrectly situated by either being too close to customers or too surrounded by customers (see text). Last column indicates cases where stand-off barriers were available.

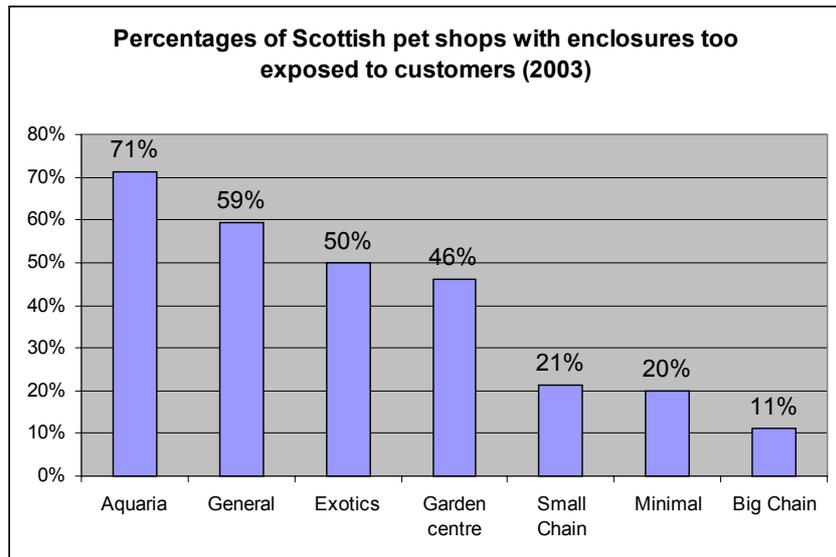


Figure 53. Percentage of Scottish pet shops with enclosures too exposed to customers in 2003, per type of shop.

Others

Regarding ventilation and hygiene, the investigation found that at least 5% (n=75) of the Scottish pet shops showed obvious signs of poor hygiene/ventilation

2.4 In order to control the spread of disease, and to prevent injury, animals must not be kept in housing in such a way that they can be disturbed by other animals or by the public.

As seen in the section about customer's interaction with the animals at least in 12% (n=75) of the Scottish pet shops there were unsupervised interactions between customers and animals with potential detrimental consequences for the animals.

2.8 All accessories provided in the accommodation must be suitable for the species.

On some occasions enclosures were seen with accessories that were not suitable for the animals in them. In one recorded case a degu enclosure was seen with a wheel. It is not advisable to place wheels with rodents that have relatively long hanging tails like gerbils and degus because they can get caught on it (this was suggested by some assistants from other shops).

3.0 Exercise Facilities

3.1 Suitable and sufficient facilities must be available where appropriate.

NB. For puppies, where required, a covered exercise area of at least 2.46 sq metres (16 sq f) should be provided. Exercise areas should have a minimum height of 1.8 metres (6 ft) to facilitate adequate access by staff for cleaning.

Only one shop was seen selling puppies, and in that particular case no exercise area as described in the Standards was seen.

5.0 Stocking numbers and densities

5.1 The maximum numbers of animals to be stocked on the premises will be governed by the accommodation available, as stated in the stocking density lists detailed in the schedules attached to these licence conditions. No other animals, other than those specified in the licence, may be stocked without prior written approval from the licensing authority. These stocking densities are provided for guidance and recommendation only.

As seen in the chapter on enclosure sizes, at least 25% (n=936) of the mammals and 47% (n=1081) of the birds kept in Scottish pet shops have an available living space of less than a quarter of the average space found for all the members of their type in all the shops investigated. This is more likely to be caused by overcrowding than just through the existence of small enclosures.

Many licensing authorities do not issue licences that specify stocking densities. 77% (n=52) of Scottish pet shops do not seem to receive licence conditions from their local authorities specifying the maximum number of animals allowed to be kept.

10.0 Excreta and soiled bedding

10.1 All excreta and soiled bedding must be kept in a hygienic manner and stored in impervious containers with close-fitting lids - away from direct sunlight.

On one occasion the investigator witnessed how excreta from a reptile enclosure was disposed into an open bin that was placed in a public area of the shop.

15.0 Pet care advice

15.1 Pet care leaflets or other similar written instructions must be made available to customers free of charge at the time of purchase, in addition to any offer to purchase pet care books or leaflets.

During summer 2003 the majority of the shops (at least 61%, n=62) did not provide, when requested, free leaflets or care sheets with information about the animals they sell to prospective buyers (figure 54). The actual percentage could be as high as 83%, since the investigator could not enquire about this issue in all the shops, and the 13 shops in which the question was not asked were aquaria or small independent shops, both unlikely to give such leaflets, as the results show).

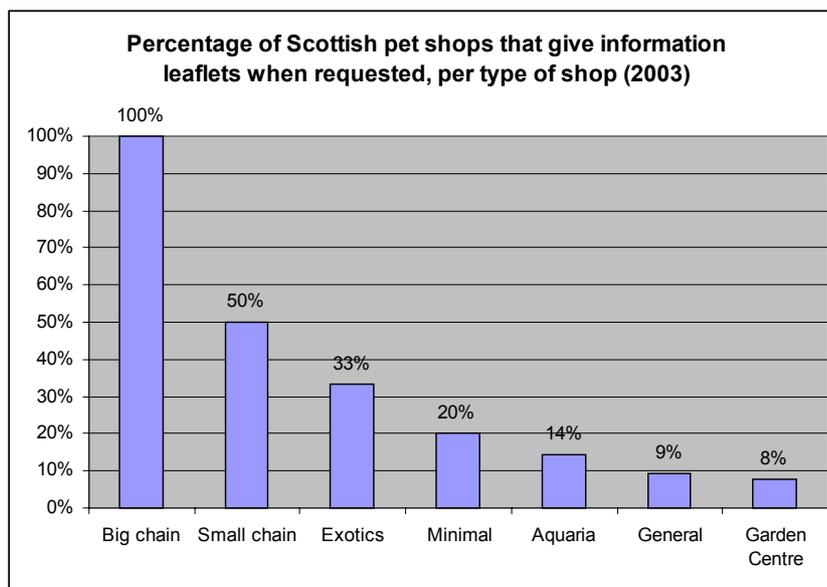


Figure 54. Percentage of Scottish pet shops that give information leaflets when requested in 2003, per type of shop.

15.2 Purchasers must be given proper advice on the care of the animal and, where necessary, on the maintenance and use of any accessories.

As can be seen in the chapter about questions asked to shop assistants, the majority of Scottish pet shops (70%, n=75) gave bad advice to customers in summer 2003. Also, when asked about any possible problem in getting a pet as a surprise to somebody that has a ten year old child, the majority of the Scottish pet shops (55%, n=62) failed to mention any potential problems for either the animals or the child, despite on no occasion was there a problem-free scenario. The majority of pet shop assistants (51%, n=70) also failed to give an unequivocal 'yes' to the question of asking first the girlfriend before buying the pet.

4.0 Boarding of Animals (further recommendations)

4.1 No pet shop should be used for the purpose of boarding any species of animal for which they are not licensed to sell. If it is intended to board cats and dogs, suitable and sufficient accommodation must be provided.

The investigator saw three shops that were keeping animals 'on holiday', to use the expression used by the shop assistants. These are animals left temporary at the shop, presumably under a boarding system, because their owners cannot look after them during the holiday period. The percentage of shops offering this service cannot be estimated because the investigation period began before most people go on holiday; however it is reasonable to assume that these are not isolate cases.

5.0 Categories of animals which a pet shop may be licensed to keep

5.2.1 *“No species of bird shall be housed in accommodation which does not afford that species sufficient space for natural free and full wing stretching and the number of birds housed shall be such that overcrowding does not significantly reduce that freedom. Long tailed birds or birds in full plumage must be provided with properly placed perches and feeding and watering points to prevent that plumage being fouled or otherwise damaged.”*

This refers to the Wildlife and Countryside Act 1981 that should not be contravened (especially Section 8 of the Act).

As can be seen in the chapter about enclosure sizes, at least 6% of the birds kept in Scottish pet shops have an available space of less than twice the volume they occupy when flapping their wings fully stretched, 2% have an available space less than 1.5 times such volume, and 1% have an available space smaller than such volume (n= 1081). Two shops have 11 birds under the last category.

5.2.2 *For perching birds, a sufficient number of perches (as appropriate) must be provided at such a height that the bird can rest its head without its head touching the top, and its tail the bottom of the cage.*

Analysing the actual available space based on the number of perches in the cages (where the birds are likely to be stretching their wings fully) 22% of the birds kept in Scottish pet shops are kept in enclosures with perches that do not provide enough space to allow all birds to fully stretch their wings without touching each other or the cage walls. This type of overcrowding occurs in 39% (n=75) of the Scottish pet shops, across most types.

The ‘LGA Standards’ have 73 points, but the compliance with the majority of them can only be assessed through an official inspection (as opposed to an investigation) in which the shop licensees collaborate providing information (i.e. ‘all livestock purchase register must be maintained for all livestock’). However, at least 18% of the ‘Standards’ points non-compliance have been found through this investigation, and in at least 5% of the points this non-compliance has been perceived to be widespread.

Scottish Local Authorities’ per shop licence conditions

From the 32 local authorities in Scotland, the random selection of 75 pet shops covered 78% of the authorities. After enquiring with each of the local authorities selected the standard licence conditions that issue 68% (n=25) of the authorities were received. This represents 76% (n=75) of the selected shops.

About one third (33%, n=57) of the licence conditions sets of the shops received are very short lists with less than 10 conditions, while another third (33%) have as many conditions or more than the LGA Standards. Less than a third (30%) of the selected shops from which information was received have licence conditions that specify enclosure sizes and stocking densities, and all these have the same sizes and numbers in relation to stocking densities.

It should be noted that most of the conditions present in the sets of licence conditions with a few items are worded in such a way that they hardly constitute conditions at all. For instance, it is inconceivable that had the local authority not issue any condition would they then license a shop that, for not having conditions in writing imposed upon them, decides to perform doing the opposite these general conditions state. For example, if a shop without conditions decided to keep animals ‘in accommodation and environment unsuitable to their species’, ‘take not reasonable precautions to prevent the outbreak and spread of disease’, or ‘use unsuitable emergency precautions’, the local authority could (and should) not renew its licence despite no conditions were issued.

Therefore, due to the fact that many licensing authorities (at least 35%, n=17) issue very few conditions most of them implicit in the common sense of keeping a pet shop (and therefore arguably unnecessary as written ‘conditions’), and only a third (33%, n=57) of the shops with information received have licence conditions with as many points or more than the LGA Standards, it is reasonable to assume that the majority of Scottish pet shops operate without any specific licence condition beyond the general conditions in point 1 of the Pet Animals Act 1951 seen above (which, for being part of the Act, do not need to be attached to the licence).

Since the Local Government Association created other licence conditions beyond the explicitly specified in point 1 of the Pet Animals Act 1951, and this seems to be precisely to encourage local authorities to issue more

conditions, we can conclude that the majority of Scottish pet shops seem to operate under licence conditions that do not adhere to the 'LGA Model Standards' for pet licence conditions.

This conclusion is confirmed by analysing each of the conditions written in the LGA Standards, and assessing how often they appear, in any form, in the pet licence conditions issued by the local authorities. This analysis shows that only 10% (n=72) of the LGA Standards conditions appear in the majority of the LA conditions, and only 4% appear in all (table 21).

LGA Standards point	Condition	% of presence in LA conditions
2.1	Animals must at all times be kept in accommodation and environment suitable to their species with respect to situation, size, temperature, lighting, ventilation and cleanliness and not exposed to draughts. All accommodation must be kept in good repair.	100%
4.1	A livestock purchase register must be maintained for all livestock.	58%
6.7	All reasonable precautions must be taken to prevent the outbreak and spread of disease. No parasites shall be brought into or kept on the premises unless effectively isolated.	100%
10.1	All excreta and soiled bedding must be kept in a hygienic manner and stored in impervious containers with close fitting lids away from direct sunlight.	53%
7.1	Animals must be supplied with adequate amounts of food and drink, appropriate to their needs,	96%
13.1	No mammal shall be sold at too early an age (unweaned or, if weaned, at an age at which it should not have been)	100%
17.1	Suitable emergency precautions (and written procedures) must exist and be made known to all staff	91%

Table 21. Presence of LGA Standard conditions in Scottish local authorities pet licence conditions. Only the points with an occurrence in the majority of licence conditions received are listed, and text in brackets are aspects of the LGA Standard conditions omitted in the local authority ones.

These results are surprising because the LGA conditions have been created from the local authorities themselves (as oppose to a different level of government) and the pet shops themselves (through the Pet Care Trust)

It could be argued, though, that the conditions are not necessary because the shops follow them without the need to be imposed upon them. This chapter has shown that this is not the case, but there is also the fact that some local authorities not only do follow the LGA Standards, but issue even more conditions than the ones present in them.

Most local authorities did not provide information about which type of animals the selected shops are licensed to keep; only information on this issue regarding 26% (n=57) of the shops which the local authorities provided licence conditions on request was sent, and from those 20% (n=15) kept animals supposedly not allowed to keep.

Some local authorities specified licence conditions not present in the LGA Standards. Examples of the issues addressed follow:

- Authorising the importation of animals only from other licensed sources
- Record all mortalities
- If exotic animals are kept specially qualified staff is needed
- Specific cage dimensions and stocking densities for birds
- Prevent unpleasant odours
- Animals should not be offered as prizes
- Animals should not be kept in cellars
- Specific materials for housing
- Specify which animals should be kept separated
- Quarantine procedures
- Specific feeding requirements for specific animals

If we analyse in detail the licence conditions provided by local authorities, and we try to assess if the shops under their jurisdiction have, in my opinion, breached those conditions, we can see that during Summer 2003 the majority (79%, n=57) of the Scottish pet shops from which their local authorities provided information about licence conditions possibly were in breach of their licence conditions in some degree (table 22).

Code	Local authority	Num. of conditions	Licence	1.1	2.1	2.4	10.1	15.1	15.2	b.5.2.1	b.5.2.2
BUG008	Aberdeen City Council	16	y	x							
WOO018	Aberdeen City Council	16	y	x	x			x			
MAR018	Aberdeenshire Council	20	y		xxx						
JUN015	Aberdeenshire Council	20	y		xx		x				
PET061	Angus Council	8	y		x						
FOR051	Angus Council	8	y		xx x						
KIR055	Angus Council	8	y		x						
PET260	Dumfries & Galloway Council	9	y		x						
DOG049	Dundee City Council	28	y		x			x	x	x	x
ACO175	East Ayrshire Council	20	y		x						
ACO067	East Lothian Council	7	y		xx						
NOR098	East Lothian Council	7	y		x						
PET115	Fife Council	75	y		x	x			xx		
ACO075	Fife Council	75	y	x					xx		
ACO068	Fife Council	75	y	x					x		
PAW100	Fife Council	75	y	x				x	xx		
KIN092	Fife Council	75	y	x					x		
HAY144	Glasgow City Council	5	expired		xx						
J&M145	Glasgow City Council	5	y		xx						
PET156	Glasgow City Council	5	y		xx						
PET218	Inverclyde Council	20	y	x	xx						
PRE225	North Ayrshire Council	8	expired		xx						
NOA199	North Ayrshire Council	8	y		x						
PRE226	North Ayrshire Council	8	expired		x x						
ACO172	North Ayrshire Council	8	y		xxx						
ACO041	Perth & Kinross Council	19	y	x	x						
ACO066	Scottish Borders Council	19	y		x						
LIB093	Scottish Borders Council	19			x						
PAW099	Scottish Borders Council	19	y		x						
ALL078	Scottish Borders Council	19	y		x						
DAP186	South Lanarkshire	13	y	x	x x						
PET212	South Lanarkshire	13	y	x							
PET213	South Lanarkshire	13	y	x	x						
PET216	South Lanarkshire	13	y		x						
ACO069	The City of Edinburgh Council	52			xx			x	xx		
ACO070	The City of Edinburgh Council	52			xx			x	x		

MOR096	The City of Edinburgh Council	52			x		x					
NOA091	The City of Edinburgh Council	52			xx	x						
PET111	The City of Edinburgh Council	52			x	x			x			
PET112	The City of Edinburgh Council	52			x	x			xx			
PET116	The City of Edinburgh Council	52				x						
PET113	The City of Edinburgh Council	52	y		x			x				
ACO235	The Highland Council	50	y		x							
PET248	The Highland Council	50	y		x				xx	x		x
BIR007	The Moray Council	7	y		x							

Table 22. Assessment of cases of Scottish pet shops believed to be in breach of their local authorities pet licence conditions during the time of the visits in 2003. Although these are just the cases which could be assessed because the respective local authorities sent on request the licence conditions under which these shops are licensed, their licence status was specified only in some of them (fourth column, y = valid licence). Column 5 to 12 show cases in which a breach of a particular licence condition equivalent to a LGA Standards licence condition (which number heads the column) is believed to have taken place. The number of 'x' in those columns roughly indicate the number of accounts in which such breaches are believed have taken place. The third column indicates the number of conditions the local authority issued. For information on the specific conditions consult the 'LGA Standards' chapter and the standards themselves (Anonymous, 1998).

OTHER MATTERS IN RELATION TO PET SHOPS

Some other issues identified during this investigation, which could be seen as possible problems for animals in Scottish pet shops, and that did not fit into any of the other sections of this report, have been explored in this chapter.

Breaking quarantine

Some pet shops, in particular 'Big Chain' shops, have a quarantine policy in which animals are kept 'theoretically' in isolation from the public during the three weeks between the day they arrive at the shop and the day the animals are allowed to be sold. It is understood that the purpose of such quarantine is to ensure that animals do not have infectious diseases when sold.

In 29% (n=7) of the shops known to use this quarantine policy, the quarantine was broken at the suggestion of the shop assistant in order to allow the investigator to see the animals as a prospective purchase. This happened on two occasions, one of which involved two parakeets that were taken out of the quarantine facilities into the main public area to show the investigator. In the other, the investigator was allowed entry to the quarantine room itself. On both occasions the birds involved returned to the quarantine room because their three-week period was not expired (figure 55).

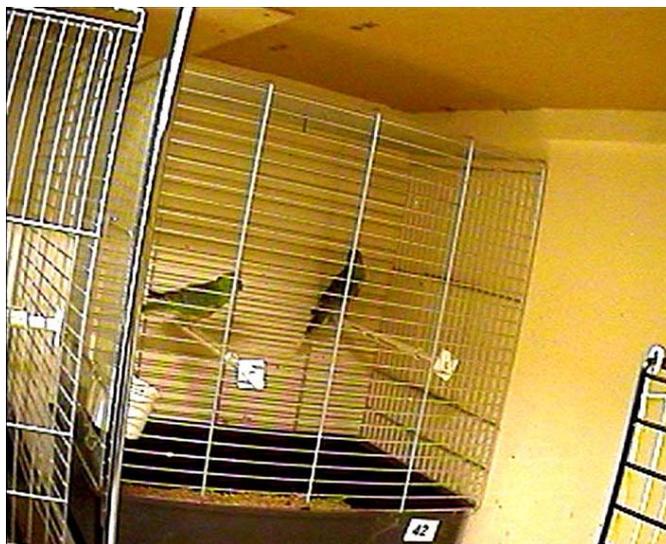


Figure 55. Parakeets in a quarantine section of a Scottish pet shop during 2003. The investigator was allowed to enter the quarantine room at the suggestion of the shop assistant.

In these cases, since nobody asked the investigator to take any special precautions to prevent disease cross contamination (the essence of quarantine practices), the quarantine process was broken.

The important point to make about these two cases is that the decision to see the animals was spontaneously suggested by the assistants with no leading whatsoever on the part of the investigator (as can be seen on the recorded tapes). On both occasions several assistants (both senior and junior) were involved in suggesting showing the birds to the investigator, which in effect broke their quarantine.

Rabbits and Guinea pigs together

Sometimes pet shops keep different types of animals in the same enclosure. An aviary, for example, is a good example of this, where cockatiels, canaries and parakeets are usually kept together. However, in some cases it may not be advisable to house together different species because one of them may end up being attacked or otherwise stressed.

There are sufficient arguments to support the opinion that this could be the case involving rabbits and guinea pigs; two different species that differ not only in size but also in diet and behaviour.

The main problem is aggression, since the difference in size, and the fact rabbits can produce powerful kicks (even when they are not aggressive), places guinea pigs at risk, especially if kept together in small enclosures.

Guinea pigs and rabbits eat different dry food mixes. The guinea pig's mix has added vitamin C, and the rabbit's mix may contain additives that are harmful to a guinea pig. It has been said that a long-term build up of such additives in the system can prove toxic to guinea pigs.

Another reason is that rabbits naturally carry the *Bordetella Bronchiseptica* virus that can be deadly to guinea pigs.

The problem is also for the rabbits, which may get bitten by the guinea pigs. In the guinea pig care web pages of cavyrescue.co.uk, there is the following statement:

“It is not wise to house Guinea pigs with rabbits, when the rabbit is mature it will try and mate the Guinea pig regardless of the rabbit's sex, the Guinea pig will inevitably bite the Rabbit causing abscesses. There are also cases of rabbits killing or seriously injuring guinea pigs if they live together.”

The investigator witnessed precisely an event that fits these comments. In one particular shop a rabbit began stressing the guinea pig so clearly that the shop assistant had to interrupt the conversation that she was having with the investigator to temporary take the guinea pig out of its enclosure and calm it down. The event was video recorded, and on the tape it is possible to see that initially the rabbit is agitated and is attempting copulation with the guinea pig, and then the guinea pig begins to scream when the assistant intervenes (figure 56).



Figure 56. Case of a rabbit and guinea pig kept together in a small enclosure in a Scottish pet shop (left) that ended up with the shop assistant taking the guinea pig out due to the harassment received from the rabbit

Despite everything mentioned, in the majority of the Scottish pet shops (55%, n=20) that keep both types of animals some are house together, sometimes in very small enclosures.

Ordering animals

During summer 2003 at least 15% of the Scottish pet shops could on request order bigger or more exotic animals than the ones they had on display. These included parrots, macaws, iguanas and constrictor snakes. In the majority of the Scottish 'exotics' pet shops customers could order animals (at least 67%, n=9), but only in 16% of the 'general shops' they could. Therefore, it is more likely that an 'exotics' shop occasionally sells and keeps animals housed in conditions not necessarily inspected when they were licensed, which could constitute a problem.

Animals not for sale

At least in 16% (n=75) of the Scottish pet shops animals are kept in the shop despite not being for sale. Some of these are animals the shop gives board temporarily (often when the owners are on holiday), but others are the shop owners pet. This may constitute a problem because some local authorities may consider that the animals not for sale are animals they do not have to inspect since they are not under the Pets Animals Act. I believe that this interpretation of the law is incorrect, since the law does not make distinctions between animals to sell or to keep, but the reality is that not all local authorities see it this way.

A particular Scottish pet shop (which was not selected although it was visited) keeps a primate (which is quite exceptional). This is a squirrel monkey, an animal that requires a Dangerous Wild Animals licence. However, the owner has no licence for the monkey, and the local authority claims that because the monkey is in a pet shop a legal loophole allows it to be unlicensed. I disagree, but if it was true (or if this is widespread belief among local authorities) this abuse of the legislation constitutes a problem, since animals under this 'loophole' could be kept in sub-standard conditions (like the case of the squirrel monkey, which lives in isolation in a very poor and small

enclosure, and is already performing stereotypic behaviour; figure 57), and the authorities would feel that they are powerless to do anything. According to this interpretation of the law, a person that wants to keep a lion on a chain only has to sell a few goldfish under a Pet Animals licence, and then he/she can keep any dangerous animals without being bothered by any local authority inspector. This clearly cannot be right.



Figure 57. Squirrel monkey kept in a small enclosure in a Scottish pet shop in 2003, performing the stereotypic behaviour know as neck-twisting

As said above, some animals not for sale are nonetheless part of the commercial activities of the shop. These are the animals boarded by the shop when customers are on holiday. Only three cases were found in this investigation, but most of the visits were made before the school holidays, so probably a higher proportion of shops offer this service.

Despite the small number of cases where this practice was seen, one of the three shops showed why this might constitute a problem. This particular shop (which due to the fact the relevant local authority chose not to inform about which animals it is licensed to sell we do not know if it is boarding animals it should not) kept many more animals ‘on holiday’ than for sale, but the conditions in which both types were kept differed considerably. The animals ‘on holiday’ were kept in a basement room without windows, and the cages were crammed together on top of each other. It was evident the room was overcrowded (figure 58). Most of these animals were rabbits, but chinchillas and African grey parrots were also present, in cages considerably smaller than the standard the investigator had seen during all the visits. The overcrowding and location of the cages, plus the fact that the temporary nature of this activity, and that it is not in a public part of the shop, indicates that the fact that this room had been inspected by the local authority with the same standard that the rest of the shop, is questionable.

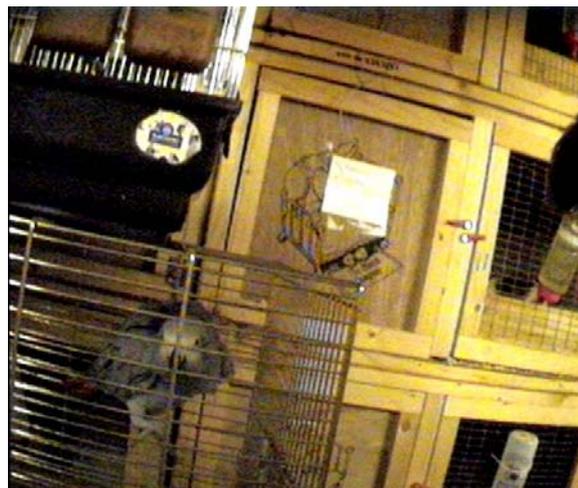


Figure 58. Case of a Scottish pet shop keeping many animals in crowded conditions in a non-public room as a boarding service for the holiday period. In the photograph an African grey parrot and rabbit cages, many piled on top of each other, can be seen.

Selling rescued animals from charities

On one occasion, one of the 'extra' visits provided an insight into a particular problem not seen in the other shops (although it may have occurred). The shop assistant showed the investigation a king snake that allegedly had just been rescued and brought in by the SSPCA (figure 59). When the investigator enquired about whether the snake was for sale, the assistant indicated that he was not sure, so he suggested to contact him in a few days. Five days later the investigator rang the shop asking again, and they confirmed that the snake in question was now for sale.

There are several reasons why this may constitute a problem. Firstly, the fact that an animal has been rescued by an animal welfare charity presumably because it was neglected or abandoned as a pet, and is then returned to 'the market' to be sold again as a pet and possibly have to endure the whole ordeal again (there seemed not to be any checking on the part of the SSPCA to ensure that the prospective buyer had experience in keeping reptiles) is quite worrying. Secondly, the fact that an animal under the custody of an animal welfare charity ends up having a commercial value as if it was any animal bred to sell generates more questions than answers. Thirdly, an animal that has just been rescued needs time to settle and recover from the stress of its situation, so it should not be sold in such a short period of time.



Figure 59. Case of a king snake being allegedly rescued by an animal charity ending up for sale in a Scottish pet shop in 2003.

There was an element of fortuity in detecting that particular case, but the question of how many animals in pet shops are also animals that have gone from pet owner to pet owner hand, with the occasional animal welfare charity hand, remains to be answered.

Connections with the pet trade outside pet shops

Pet shops are not the only way in which people can buy a pet nowadays. The Pet Animals Act 1951 specifies that anyone that wants to sell only their own pets or their descendants do not need to get a pet shop licence (if they are not classified as dangerous animals). In fact, most cat and dogs in Scotland are bought outside the pet shop circle, directly from members of the public or from specialised dog breeders, that need another type of licence. Only 1% of the Scottish pet shops in 2003 sold dogs displayed in their shops, and only 3% sold cats displayed in their shops. Nevertheless, cats and dogs remain the most popular pets.

Another source of obtaining pet animals is through specialised clubs, associations or networks in which members sell their pets to each other. This seems to be the most common way to get exotic animals, especially reptiles. There are a number of reptiles associations in the UK that meet regularly at events where commercial activity in selling live animals takes place. Often professional breeders and traders are part of these events, which may have departed from the original 'amateur' approach. Some of these events are illegal due to the fact that they are unlicensed and organised in markets or public places, which the Pet Animals Act 1951 prohibits. Others are just not allowed to take place by the local authority that does not support this kind of commercial gathering. Others, though, still exist by exploiting certain legal loopholes, or pretending that the gatherings are not public.

One of the newest and probably most prolific way to get pets nowadays is the Internet. Not only establishments with pet shop licences trade themselves through the net, but so do many private individuals that seek to trade their pets in it, often internationally. Numerous websides and Internet forums exist for this trade.

The problem with this trade outside pet shops is that it is mainly unregulated and away from the view of animal protection groups that would keep an eye on the standards of animal care. Animals can be treated in any way possible and the chances are that nobody will ever find out. In most cases authorities are powerless to take action if some form of abuse takes place. This trade is also the skeleton of the illegal exotic pet trade that is seen as responsible for the disappearance of many endangered species.

Pet shops should not be encouraging unregulated trade, but many actually do. Many shops have notice boards where the general public can place their ads to sell their own pets. On many occasions these ads are to sell dogs or cats, but also to sell exotic animals, often animals the pet shop is not licensed to sell.

On two occasions pet shops approached suggested to get in contact with specialised exotic animal breeders/dealers they recommended, instead of advising the investigator to go to another pet shop. On one occasion the pet shop advised to go to a local rare breeds zoo, which they said sometimes sell domestic pets to the public.

One particular shop was, in fact, a hybrid between a shop and an unregulated activity of the type mentioned. As a shop, it was advertised in the Yellow Pages in the pet shop section, claiming to be a reptile centre where people can go and buy pets. In fact it turned out to be a private residence where allegedly a 16 year old teenager (according to what they said in a telephone conversation) was in charge of the selling of reptiles (snakes and lizards) to whoever contacted them by phone. The local authority did not know anything about this place, which certainly did not have a pet shop licence.

THE CASE OF PET SHOPS SPECIALISING IN EXOTIC ANIMALS

The pet trade in exotic animals is quite different to the trade dealing with locally bred domestic animals. It not only has an international dimension, but also inherits all the problems of keeping animals in captivity, multiplied by the fact the animals in question are biologically and psychologically much less adapted to captive life. You would expect, then, that a pet shop that specialises in exotic animals would have more animal related problems than the rest. For this reason it was considered appropriate to pay special attention to shops selling exotics animals as the most important part of their business.

It can be said that pet shops that sell exotic animals play a somehow significant role in the wider problem generally known as the 'illegal pet trade'. Many conservationist partially blame such trade for the threat of extinction that many species and ecosystems in this planet are facing. Although shops may be selling the exotic animals legally, it can be argued that they contribute to the problem by reinforcing and extending the market that generates the demand for such animals. Such demand, like in any illegal trade, is the root of the problem. A recent study of nest poaching for Neotropical parrots (Wright et al. 2001) supported the hypothesis that the legal and illegal trade in parrots are positively co-related, rather than inversely co-related as has been suggested by avicultural interests.

This is not only a serious issue, but also a very contemporary one. In the United States the trade in live reptiles grew substantially in the 1990's. In 1995 more than 2.5 million reptiles were imported into USA, the country that a year later was responsible for 9.5 million reptiles being exported to Europe and Asia (Hoover, 2000).

The exotic trade problem has also an animal welfare dimension, not only a conservation one. Many of the health problems that captive exotic animals from the pet trade suffer can be related to the accumulation of stressors that the animals experience during the trading process (Uinke et al. 1999).

Much of the exotic pet trade takes place away from the traditional commercial public avenues. A good example of this can be seen in the initial chapters of this report, in which the results show that pet shops specialising in exotic animals are a minority in Scotland. This fact, however, does not help to study in more detail these type of shops, because it generates a very small random sample from which it is difficult to draw conclusions. For this reason it was decided to visit more shops classified as 'exotics' than the six shops randomly selected.

To avoid any bias on which 'exotics' pet shops (as defined in the initial chapters) to visit in addition to the selected ones, all pet shops that advertised the selling of reptiles or parrots in big adverts in the Yellow Pages were visited. Adding the information obtained from randomly selected shops that ended up classified as 'exotics' (six shops in total, three of them classified after having being visited since the Yellow Pages advert did not indicate which were the main animals for sale) with the information obtained from the extra shops visited that could be classified as 'exotics' advertising in big adverts in the Yellow Pages (seven shops), a new sample of 12 shops was obtained for analysis. One particular shop (CUP012-G) advertising in the Yellow Pages as selling exotics was eventually classified as a 'Garden Centre', and although it was visited as an 'extra' shop for being selected as extra garden centre, the information obtained has not been included in this chapter.

Therefore, the conclusions of this chapter do not come from a randomly selected sample (and therefore representative of all 'exotics' pet shops), but from a sample that covers the main 'exotics' pet shops (all the ones that advertise their exotic sales in big adverts on the Yellow Pages), plus three 'exotics' shops that did not advertise with big adverts, although only one of them did not mention any exotic in its advert.

In all cases the term 'exotic' was not applied to fish, only parrots or macaws were considered as exotics for the purpose of selecting the extra shops to visit (although other birds like cockatiels were considered as exotic animals in any analysis) and no English shop that may have been advertised in Scottish Yellow Pages was included.

Animals in the main 'exotics' pet shops

The number of individual animals present in the main Scottish 'exotics' pet shops were counted. In the cases where animals were not visible (possibly because they were hidden under the enclosure furniture) but the enclosure had a sign, the presence of at least one individual was assumed.

The average number of individual animals seen/assumed per main 'exotics' pet shops is 76.4 (n=12), very close to the value calculated using only the selected shops (75.7, n=6). We can then conclude that the main Scottish 'exotics' shops are representative of all Scottish 'exotics' shops as far as number of individuals seen is concerned.

The high number of individuals per shop shows that animals in 'exotics' pet shops may be at a higher risk to be overcrowded, especially because these shops do not seem to be bigger than the other types. In fact, several 'exotics' shops visited during this investigation gave the impression of overcrowding (figure 60)



Figure 60. Example of a Scottish main 'exotics' pet shop visited in 2003 in which the high number of individual animals kept is apparent.

Regarding the types of animals (figure 61), about 132 different types of animals other than fish were found in the main Scottish 'exotics' pet shops (the exact number depends on agreeing in the appropriate name for some animals, named differently across the shops).

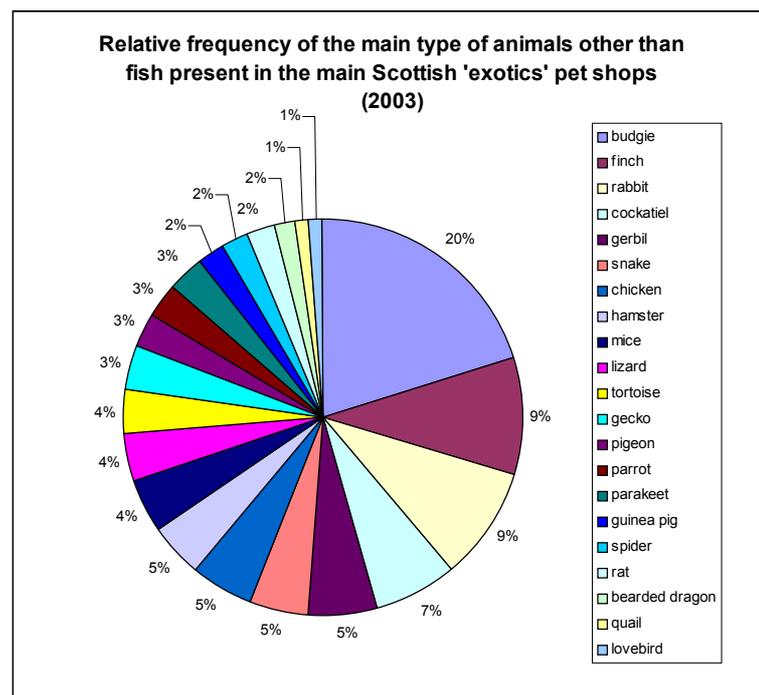


Figure 61. Relative frequency of the main type of animals other than fish present in the main Scottish 'exotics' pet shops in 2003 (see text). Types of animals with frequencies smaller than 1% have not been included, but in total they do not represent more than 10% of all animals.

The data shows that the majority of the main 'exotics' pet shops are not exclusively dedicated to exotic animals, but also to the common animals sold in other pet shops. In fact, from all the 12 shops visited only 3 (25%) were exclusively dedicated to exotics, reinforcing the hypothesis that the bulk of the exotic pet trade may occur away from the pet shop industry.

If we look only at the exotic animals sold in the main exotic pet shops (figure 62), the majority are exotics commonly found in other types of shops, as opposed to very specialised types.

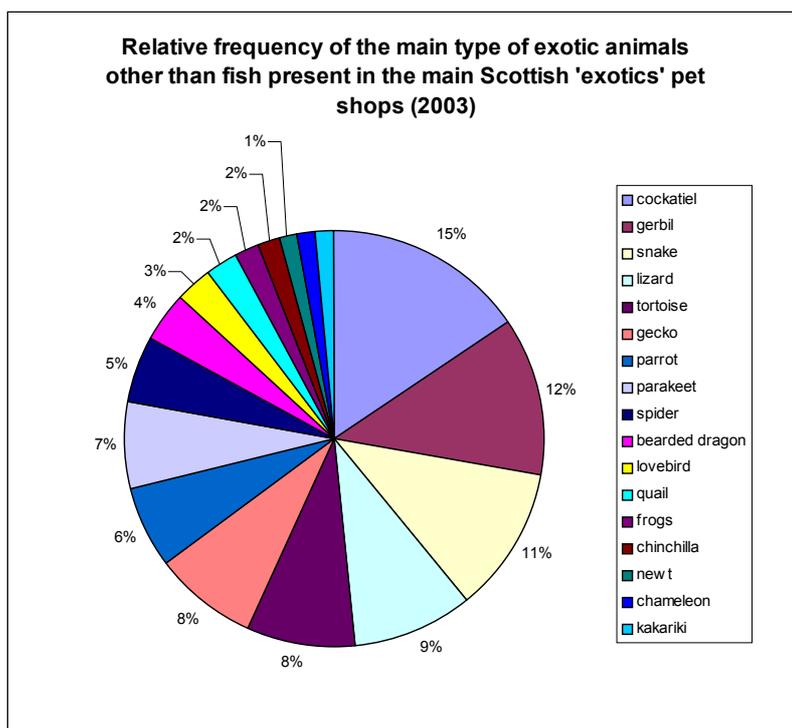


Figure 62. Relative frequency of the main type of exotic animals other than fish present in the main Scottish 'exotics' pet shops in 2003 (see text). Types of animals with frequencies smaller than 1% have not been included, but in total they do not represent more than 10% of all animals.

The different type of non-domesticated animals found in the main Scottish 'exotics' pet shops can be seen in table 23.

Animal type	individuals	Taxonomic group
Tree frog	2	amphibian
Spotted newt	2	amphibian
Newt	2	amphibian
Fire salamander	2	amphibian
White tree frog	1	amphibian
Pacman frog	1	amphibian
Grey tree frog	1	amphibian
Frog	1	amphibian
Fire belly newt	1	amphibian
European green tree frog	1	amphibian
Cockatiel	56	bird
African Grey Parrot	12	bird
Quail	9	bird
Lovebird	9	bird
Parakeet	6	bird
Kakariki	5	bird
Barnards parakeet	5	bird
Ringneck parakeet	4	bird
Red rump parakeet	4	bird
Green bengalese finch	3	bird
Senegal parrot	2	bird
Rossella parrot	2	bird
Red lored amazon	2	bird
Princess of Wales parakeet	2	bird
Minha	2	bird

Grey ringneck parakeet	2	bird
Green cheeked conure	2	bird
Diamond dove	2	bird
Conure	2	bird
Cardinal	2	bird
Bourkee	2	bird
Alexandrine parakeet	2	bird
Umbrella cockatoo	1	bird
Sunconia parrot	1	bird
Sun conure	1	bird
Silver pheasant	1	bird
Reeves pheasant	1	bird
Red belied macaw	1	bird
Pheasant	1	bird
Patagonian conure	1	bird
Parrot	1	bird
Nanday conure	1	bird
Mili Amazon parrot	1	bird
Meyer's parrot	1	bird
Mealy Amazon parrot	1	bird
Jendaya conure	1	bird
Fishers lovebird	1	bird
Ecclectus parrot	1	bird
Ducorps cockatoo	1	bird
Blue and gold macaw	1	bird
Black headed caique	1	bird
Bear eye cockatoo	1	bird
Amazon parrot	1	bird
Tarantula spider	16	invertebrate
Imperial scorpion	2	invertebrate
Hissing cockroach	2	invertebrate
Chilean rose tarantula	2	invertebrate
Spider	1	invertebrate
Stick insect	1	invertebrate
Gerbil	45	mammal
Chinchilla	6	mammal
Chipmunk	3	mammal
Horsfield tortoise	25	reptile
Leopard gecko	15	reptile
Bearded dragon	14	reptile
Corn snake	10	reptile
Green anole	8	reptile
Yemen chameleon	5	reptile
Water dragon	5	reptile
Royal python	5	reptile
Tokay gecko	4	reptile
Collared lizard	4	reptile
Blue tongue skink	4	reptile
Crested gecko	3	reptile
California king snake	3	reptile
Tortoise	2	reptile
Sry lankan python	2	reptile
Milk snake	2	reptile
King snake	2	reptile
Honduran milk snake	2	reptile

Day gecko	2	reptile
Dab lizard	2	reptile
Sun gazer	1	reptile
Spurred tortoise	1	reptile
Spiny lizard	1	reptile
Snake	1	reptile
Skink	1	reptile
Sinaloan milk snake	1	reptile
Side blotched Lizard	1	reptile
Reptile?	1	reptile
Rat snake	1	reptile
Rainbow boa	1	reptile
Pine snake	1	reptile
Panther chamaelon	1	reptile
Montail skink	1	reptile
Mexican milk snake	1	reptile
Mancowari green tree snake	1	reptile
Lizard	1	reptile
Leopard tortoise	1	reptile
Indian star tortoise	1	reptile
Iguana	1	reptile
Gopher snake	1	reptile
Golden gecko	1	reptile
Giant bend gecko	1	reptile
Gecko	1	reptile
Eyelash gecko	1	reptile
Eyed lizard	1	reptile
Damaril ground boa	1	reptile
Cuban Curly skink?	1	reptile
Crevis spiny lizard	1	reptile
Common boa	1	reptile
Childrens python	1	reptile
Bosc monitor	1	reptile
Black green tree snake	1	reptile
Barber skink	1	reptile
Barbara ? Snake	1	reptile
Banded gecko	1	reptile
Australian carpet python	1	reptile
Arizona mountain king snake	1	reptile
Applegate Gopher	1	reptile

Table 23. The different type of non-domesticated animals (with the name given at the shop, which may vary in different shops for the same type) found in the main Scottish ‘exotics’ pet shops in 2003.

Abnormal behaviour in the main ‘exotics’ pet shops

As seen in the chapter about abnormal behaviour above, the majority of the selected ‘exotics’ pet shop (67%, n=6) showed animals performing abnormal behaviour. Most of the animals encountered in all the selected shops (76%) showing abnormal behaviour were exotic animals (figure 63).

The analysis of this issue with the 12 main ‘exotics’ shops confirms even more these results, with a higher percentage of main ‘exotics’ pet shops showing abnormal behaviour (83%, n=12; 75% without counting fish), and higher percentage of animals other than fish showing abnormal behaviour being exotic (90%, n=20).

These results add support the hypothesis that exotic animals may suffer more as pets than do domestic animals. Equally, the results also support the possibility that exotic animals express more that suffering through abnormal

behaviour than do domestic animals, despite both may suffer the same. The biological difference between exotic and domestic animals suggest that the former seems to be more likely.

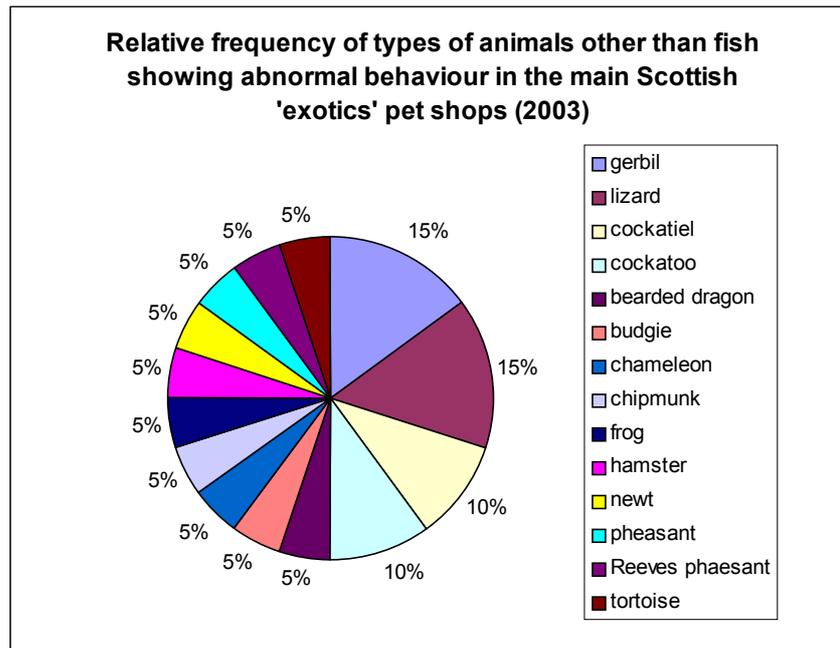


Figure 63. Relative frequency of types of animals other than fish showing abnormal behaviour in the main Scottish 'exotics' pet shops in 2003.

Advice from shop assistants in the main 'exotics' pet shops

In the chapter about the 'child question' above we can see that 55% of the shops assistants say that there are not problems if the investigator buys a pet as a surprise present for his girlfriend with a ten year old son. This percentage of 'no' answers increases to 73% (n=11) in the case of the main 'exotics' pet shops. This, considering the fact that the risk may be higher if the animal in question is an exotic animal (zoonoses, for example), is quite significant.

Referring to the 'ask girlfriend' question (which showed that 51% of the shops failed to give an unequivocal 'yes' to the question of asking first before buying the animal 'on impulse'), the percentage of main 'exotics' shops failing to answer 'yes' declines to 18% (n=11), so in this respect the advice is better. This change could be explained by the fact that many 'exotics' pet shops may consider themselves catering for 'specialist' customers, therefore being more reticent in allowing animals to be bought on impulse by a non reptile aficionado.

As seen above, when enquiring about the requirements for reptile enclosures the majority of the pet shop assistants (89%, n=9) failed to suggest that a replacement UV light was needed every six months. Analysing the same question for the main 'exotics' shop, the percentage remains similar (86%, n=7).

Conclusions about the main 'exotics' pet shops

It appears that the main 'exotics' pet shops keep many animals, show high occurrence of abnormal behaviour (mainly in the exotic animals they keep) and although they would not necessarily advise that exotic pets are 'for everybody', they seem to play down the potential problems that keeping an exotic pet may cause to a child or the animal.

Other problems apart from these were also detected. For instance, in none of the main 'exotics' pet shops was a copy of the Pet Animals licence seen, and the majority of the main 'exotics' pet shops (91%) have cases of potential overcrowding and/or small enclosures.

All the data in this chapter supports the idea that pet shops specialising in exotic animals stand out from the rest for potentially having more animal problems. It appear to be more animals having difficulties coping with their lives in 'exotics' pet shops than in any other type of pet shops, and this is probably because exotic animals themselves seem to suffer more when kept in a pet shop.

It would be reasonable to assume that the problems exotic animals seem to have in pet shops will not disappear when they leave the shops and become somebody's pet. Therefore, this study could be used to support initiatives that aim to stop the exotic animal pet trade by reducing the initial demand.

CONCLUSIONS

Abnormal behaviour

- In 2003 the majority (55% n=75) of the Scottish pet shops kept animals showing abnormal behaviour.
- In 2003 Scottish pet shops specialising in exotic animals were the type of pet shop with more cases of animal abnormal behaviour seen in this investigation (67%, n=6), followed by all the 'chain' shops where almost half showed such behaviour, and 'general' shops where almost a third showed it.
- More than three quarters (76%, n=50) of the animals other than fish showing abnormal behaviour in Scottish pet shops in 2003 were exotic animals.
- The majority of the Scottish pet shops during 2003 (57%, n=75) had animals that showed distress probably caused by the conditions they were housed.

Enclosure size

- 43% of the individual mammals kept in the Scottish shops in 2003 were in enclosures that during the course of the animal's natural growth were likely to become smaller than the minimum recommended.
- At least 25% (n=936) of the individual mammals kept in Scottish pet shops in 2003 had an available enclosure volume of less than a quarter of the average volume found in this investigation for all mammals of the same type.
- 4% of birds kept in Scottish shops in 2003 are suspected of being kept in cages with a floor area smaller than the minimum floor area recommended.
- At least 47% (n=1081) of the individual birds kept in Scottish pet shops in 2003 had an available cage volume of less than a quarter of the average cage volume found in this investigation for all birds of the same type.
- 22% of the birds kept in Scottish pet shops in 2003 were kept in enclosures with perches that did not provide enough space to allow all birds to fully stretch their wings without touching each other or the cage walls.
- In 2003 at least in 60% (n=75) of the Scottish pet shops one or more cases of enclosure/cages appearing to be too small were found.

Human/animal interactions

- During Summer 2003 at least in 12% of the Scottish pet shops there were unsupervised interactions between customers and animals with potential detrimental consequences for both the animals and/or customers.
- Only 1% of the Scottish pet shops studied had assistants that mentioned to the investigator the risk of getting a disease from an animal.
- In 2003 at least 16% (n=75) of the Scottish pet shops had assistants that disturbed their animals' peace to show them to customers, without a real need to do so to secure the purchase.

Advice from pet shop assistants

- When asked about any possible problem in giving a pet as a surprise to somebody that has a ten year old child, the majority of the Scottish pet shop assistants (55%, n=62) failed to mention any potential problems for either the animals or the child, despite on no occasion there ever being a problem-free scenario.
- Only 2% (n=62) of the Scottish pet shop assistants suggested zoonoses as a potential problem when asking about buying a pet for somebody that has a child.
- The majority of the Scottish pet shop assistants (51%, n=70) failed to answer an unequivocal 'yes' to the question of whether one should ask first before buying a pet for someone that does not know about it.

- The majority (at least 71%, n=75) of Scottish pet shops have assistants that gave bad advice to customers in the Summer 2003.

Compliance to regulation and guidance

- In Summer 2003 at least 9% of the Scottish pet shops were illegally open because they did not hold a valid pet shop licence.
- In 2003 at least 18% of the 'LGA Standards' licence conditions were not complied by Scottish pet shops, and in at least 5% of these conditions this non-compliance is perceived to be widespread among Scottish pet shops.
- The majority of Scottish pet shops in 2003 seem to operate under licence conditions that do not adhere to the LGA model standards for pet licence conditions.
- In 2003 only 10% (n=72) of the 'LGA Standards' licence conditions appear in the majority of the Scottish local authorities pet licence conditions, and only 4% appear in all of them.
- In my opinion, during Summer 2003 the majority (79%, n=57) of the Scottish pet shops from which their local authorities provided information about licence conditions possibly were in breach of their licence conditions in some degree. These represent at least 60% of all Scottish pet shops.

Other possible problems in pet shops

- In 29% (n=7) of the Scottish pet shops known to use a quarantine policy in 2003, the isolation of quarantine was broken at the suggestion of the shop assistant to allow customers to see the animals as a prospective purchase.
- In the majority of the Scottish pet shops (55%, n=20) that kept rabbits and guinea pigs in 2003 some were kept together in the same enclosure, despite it is generally recommended not to do so.
- During 2003 at least 15% (n=75) of the Scottish pet shops could order on request bigger or more exotic animals than the ones they had on display.
- At least in 16% (n=75) of the Scottish pet shops in 2003 animals were kept in the shop despite not being for sale.

Shops specialising in selling exotic animals

- In 2003, the majority of the main Scottish pet shops specialising in selling exotic animals (83%, n=12; 75% without counting fish) showed animals performing abnormal behaviour.
- In the majority of the main Scottish pet shops specialising in selling exotic animals in 2003 most of the animals other than fish (90%, n=20) showing abnormal behaviour were exotic animals.
- When asked about any possible problem in giving a pet as a surprise to somebody that has a ten year old child, the majority of the main Scottish pet shops specialising in selling exotic animals (73%, n=11) in 2003 had assistants that failed to mention any potential problems for either the animals or the child, despite on no occasion there was a problem-free scenario.
- The data in this study supports the hypothesis that in 2003 Scottish pet shops specialising in exotic animals stand out from the other types of shops for potentially having more animal problems. It appears that more animals have difficulty coping with their lives in 'exotics' pet shops than in other types of pet shops, and this is probably because exotic animals themselves seem to suffer more when kept in captivity.

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