

The sourcing of feeder animals for snakes kept in the UK.

Kelsey Jones, Gavan Cooke & Wanda McCormick

Exotic pet keeping has increased over the past two decades (Grant *et al.*, 2017). Estimated UK pet snake numbers range from 200,000 (PFMA, 2019) upwards, plus many more in zoological institutions and educational establishments. Many commonly kept species require whole vertebrate prey as food. Most are fed frozen-thawed deceased animals (live feeding is highly discouraged although not illegal if supported by veterinary advice, an ethical review has been undertaken, and it happens away from public viewing). There is no specific legislation covering husbandry of feeder animals beyond the general needs in the Animal Welfare Act (2006), but the Animal (Scientific Procedures) Act (1986) outlines humane killing methods for feeder animals for reptiles involved in research. Corn snakes (*Pantherophis guttatus*) and royal pythons (*Python regius*) are the most popular species kept by private keepers (Peters and Wallach, 2019) while the Burmese Python is the most popular giant species (Tapley *et al.*, 2011), so it is expected that most feeder animals for pets would be rodents (rats and mice). However, there is a very wide range of species held in the UK of different sizes and dietary needs. Snake owners may source feeder animals from a range of places (e.g. pet shops, online) or even breed their own supply. To date, there is no knowledge of what types of feeder animals are being fed, where they are sourced from, or the reasons for this choice. This study aimed to address this.

Methods:

- Online survey using Online Surveys, distributed by email to pet shops, reptile shops, colleges and zoos, and through closed snake hobbyist groups on social media sites, e.g. Facebook, to pet keepers and private breeders.
- Available Aug 2018 to Jan 2019 (152 days).
- Minimum age 18 yrs, responsible for at least one snake. Fully anonymised.
- 20 item survey: what type of keepers participants were, the species of snake they kept, what these species are fed, where they obtained the food and the reason they obtained the food in that way.
- Ethical approval from Anglia Ruskin University, support from BIAZA.

Table 1. Number of respondents reporting using each food item.

Food	Total
Mice	579
Rats	466
Chicks / chickens	165
Multimammate mice	93
Rabbits	82
Gerbils	66
Quails	54
Guinea pigs	45
Hamsters	34
Fish	33
Amphibians	10
Snakes	6
Reptilinks	5
Lizards	2
Chicken eggs	2
Quail eggs	2
Brine shrimp	1
Bloodworm	1
Lambs	1
Worms	1
Crickets	1

Results:

- 759 responses, 651 in full (422 female, 220 male, 6 other), most aged 18-40 (80.95%).
- BIAZA Zoo employees (11), Non-BIAZA Zoo employees (6), College or Education Centre employees (24), Pet Shop employees (9), Reptile Shop employees (9), Pet Keepers (510), Private Breeders (13) and Pet Keepers and also Breeders (69).
- 19 species. Most common: corn snake (n=426), royal python (n=319) and boa constrictor (n=149).
- Wide range of foods reported (table 1).
- 14 people reported feeding live animals under the instruction or supervision of a vet.
- Most food sourced from pet shops, reptile shops or online (figure 1).
- Convenience and cost key factors in choice but many people reported a lack of options (figure 2).

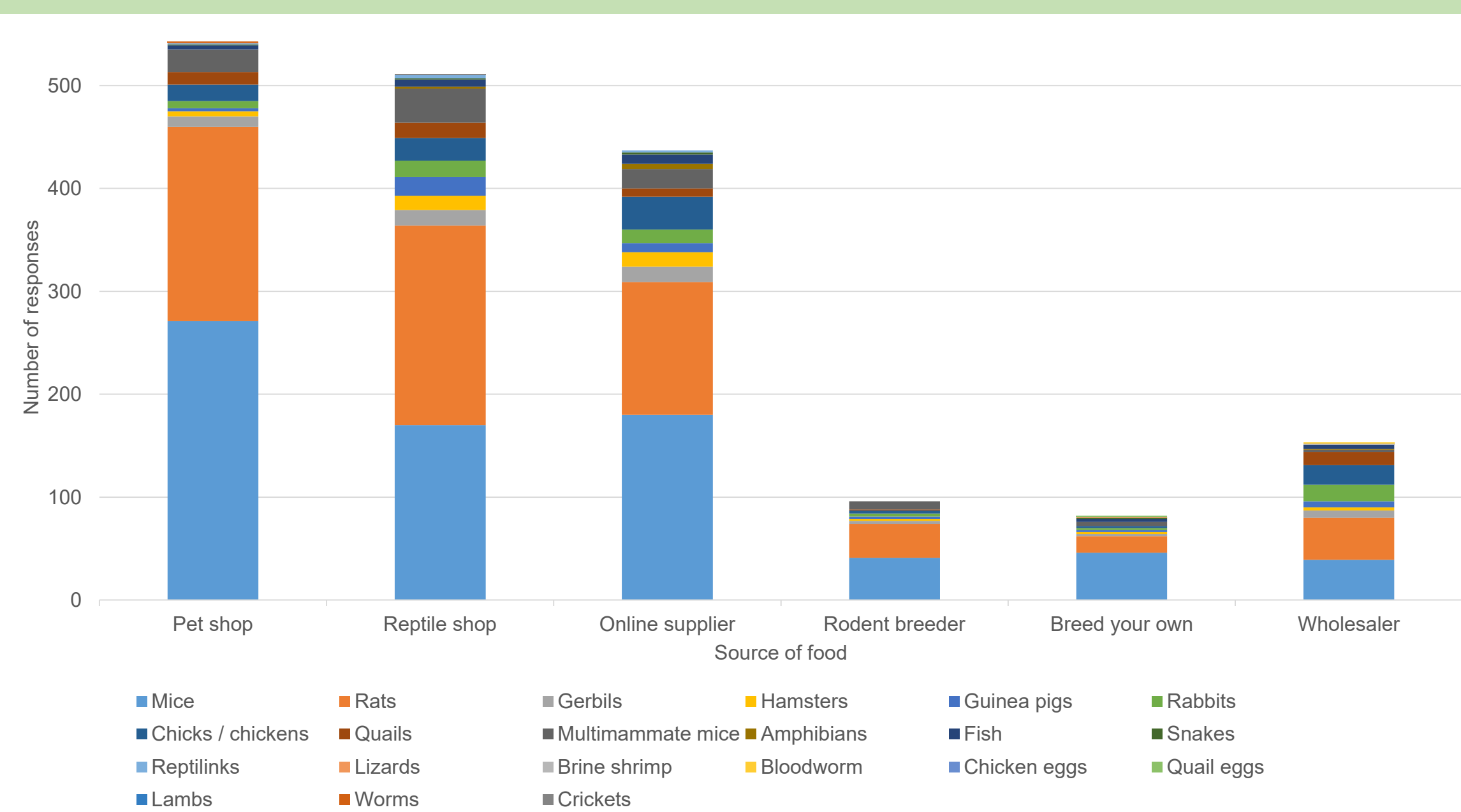


Figure 1. Number of respondents using each source of food according to type of food being provided.

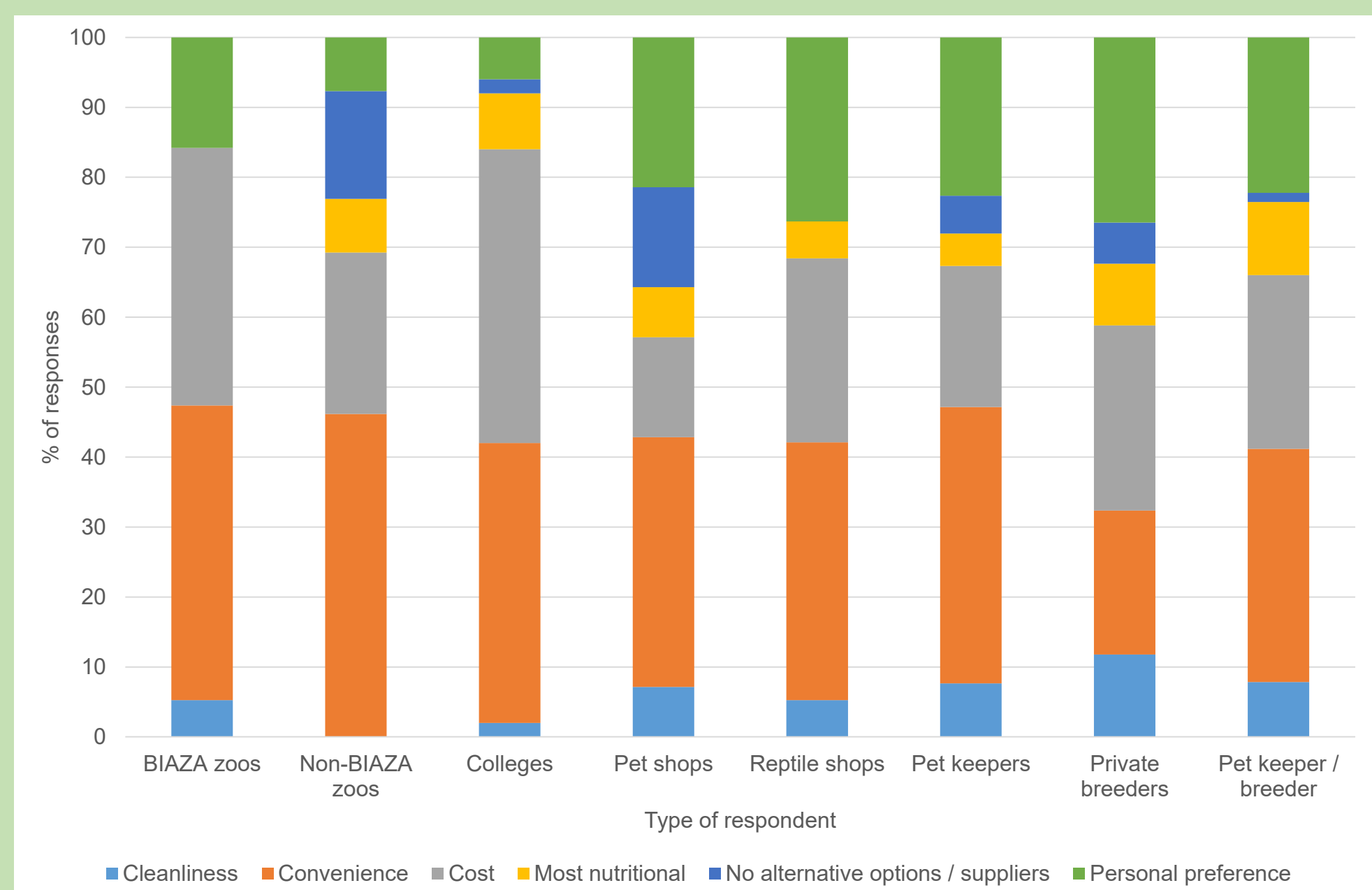


Figure 2. Reason for choosing the source of food as a proportion of responses by respondent type.

Discussion / conclusion:

As expected, rodents were most commonly fed but species do not always mirror closest to wild diet (e.g. multimammate mice would be part of natural diet for royal python). Cost may factor heavily here with mice, rats and chicks being significantly cheaper than other foods. As detailed nutritional requirements and care information are still lacking for many species, this area needs further exploration. More specialist species (e.g. king cobra) tended to be kept by private keepers rather than zoos which could reflect the way that private reptile keepers may differ to keepers of other more common pets. Breeding of own feeder animals was more common in private keepers than expected and, combined with several people admitting to live feeding, this raises concerns about an area of animal keeping that has little regulatory control, or even publically available information.