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Hungry for Success: Urban Consumer Demand for Wild Animal Products in Vietnam

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Abstract

Rising urban prosperity is escalating demand for wild animal products in Vietnam. Conservation interventions seek to influence consumer demand, but are based on a limited understanding of consumers and consumption behaviour. This report presents key findings of a structured survey (n=915) and semi-structured interviews (n=78) to investigate the social context of consumption of wild animal-derived products among the population of central Hanoi. Wildmeat is the product most commonly reported consumed—predominantly by successful, high-income, high-status males of all ages and educational levels—and is used as a medium to communicate prestige and obtain social leverage. As Vietnam's economy grows and its population ages, demand for wildmeat and medicinal products is likely to rise. Given the difficulties of acting on personal rather than collective interests and the symbolic role of wildmeat in an extremely status-conscious society, reducing demand is challenging. Influencing consumer behaviour over the long term requires social marketing expertise and has to be informed by an in-depth understanding, achieved using appropriate methods, of the social drivers of consumer demand for wild animal products. In the meantime, strengthened enforcement is needed to prevent the demand being met from consumers prepared to pay the rising costs of finding the last individuals of a species.

Keywords: bear bile, bushmeat, consumers, consumer demand, Southeast Asia, traditional medicine, supply side approaches, Vietnam, wildmeat, wildlife trade

INTRODUCTION

Vietnam is an established thoroughfare for illegal wildlife trade (Lin 2005), and rapidly growing urban prosperity is believed to be escalating domestic demand for wild animal products and for wildmeat in particular (World Bank 2005; Venkataraman 2007; TRAFFIC 2008; Drury 2009).

Demand for wildmeat is also considered the primary driver of wild animal harvesting in many African (Bakarr *et al.* 2002; Barnett *et al.* 2002; Mendelson *et al.* 2003; Kumpel 2006;

Schenck *et al.* 2006) and neotropical countries (Peres 2000; Fa *et al.* 2002; Leon & Montiel 2008). The major demand for wildmeat in these regions is driven by the need for animal protein in the absence of accessible alternatives (Apaza *et al.* 2002; Barnett *et al.* 2002; de Merode *et al.* 2004; Wilkie *et al.* 2005; Jambiya *et al.* 2007; Leon & Montiel 2008). Similarly, while many wild animal species are predominantly harvested for wildmeat in northeast India (Hilaluddin & Ghose 2005) and the western Indian Himalayas (Kaul *et al.* 2004), most of it is categorised by researchers as for subsistence use, with only a limited amount meeting the demand from urban centres. In Vietnam, however, the majority of wild animal species harvested are now fed into commercial trade networks serving the growing urban middle class in provincial towns and cities (Compton & Le 1998; SFNC 2003; Donovan 2004; Robertson 2004).

Based on direct investigations of wildlife trade and data collected from key informants, Nguyen (2003) estimates that up to half the volume of wild animals traded in Vietnam is consumed

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domestically, 80% as wildmeat in restaurants concentrated in urban areas including Hanoi and provincial capitals (Nguyen 2003; Robertson 2004). A recent survey of Hanoi residents found 47% reported using wildlife products in their lifetime, 82% of whom reported eating wildmeat (Venkataraman 2007). However, without the measurement of consumption within a specific time frame, these findings give limited insight into current levels of domestic consumer demand.

A significant, and increasing, number of commercial wildlife farms are operating in Vietnam but are poorly monitored and their impact largely unknown (WCS 2008; Brooks *et al.* 2010). The main taxa reported on Vietnamese wildlife farms are crocodile (*Crocodylus siamensis*), python (*Python molorus*; *Python reiculates*), cobra (*Naja naja*; *Ophiophagus hannah*), soft-shelled turtle (*Pelodiscus sinensis*), bear (*Ursus tibethanus*; *Ursus malayanus*), macaque (*Macaca fascicularis*), deer (*Cervus unicolor*) and porcupine (*Hystrix brachyura*) (WCS 2008). Wildlife farms often also trade in wild-caught animals (Robertson 2004; Brooks *et al.* 2010).

Even if the scale of illegal trade in wild species is uncertain, its impact is increasingly evident. Eradication of Asian wildlife is happening faster than habitat degradation (Bennett 2002; World Bank 2005) and unsustainable hunting for trade is repeatedly identified as a primary threat to many species (Duckworth *et al.* 1999; Robertson 2004; Robertson *et al.* 2004; Nguyen 2008). In parts of Southeast Asia, species hunted for centuries have vanished entirely and in some areas even small mammals and birds have been extirpated (McGowan *et al.* 1998; Rabinowitz 2001). At least 12 vertebrate species have been hunted to extinction in Vietnam in the last 40 years (Bennett & Rao 2002) and the government's Forest Protection Department (FPD) estimates that 200 species of birds and 120 other animal species have become locally eliminated over the last four decades, mainly due to illegal hunting and trade (Nguyen 2003).

Influencing consumer demand for certain wildlife products, where this is driving overexploitation of wild species, through social marketing and education campaigns is now considered an important component of conservation efforts (Bowen-Jones *et al.* 2003; Venkataraman 2007). Despite increasing emphasis being placed on consumer-targeted interventions in China and Southeast Asia, however, only recently have consumers in Vietnam become the focus of research (Venkataraman 2007; Li *et al.* 2008). Consumer-targeted interventions have therefore been based on a limited knowledge of consumer behaviour, which hampers the design of effective measures to influence demand. To inform the development of pertinent and effective consumer-targeted conservation strategies, and avoid unexpected antagonistic responses, improved understanding of consumers is necessary. This paper seeks to address this gap by identifying the characteristics of consumers of—and explore the social drivers of demand for—wild animal products among the residents of central Hanoi.

METHODS

This research focuses on central Hanoi where consumers

contributing to expanding domestic wildlife markets are concentrated (Nguyen 2008).

Structured Survey

A structured questionnaire was completed face-to-face with respondents (n=915) between February and August 2007. The sampling frame comprised the four central districts (Ba Dinh, Dong Da, Hai Ba Trung, Hoan Kiem), with a sample proportional to population size surveyed in each (General Statistics Office of Vietnam 2006). Questionnaires were completed along 25 pre-determined transects across which every third house, business or street seller—herein called Response Unit (RU)—was approached. Within each RU, respondents were chosen according to pre-determined characteristics of gender and age on a rotational basis. This determined who responded within each RU and weighted the sample according to the population.¹

Respondents were asked on how many occasions in the last twelve months they had eaten, bought or been given wildmeat. The Vietnamese term *thịt thú rừng* (meaning *meat of the forest*) was used, which also typically encompasses unusual or exotic meats that are not necessarily derived from forest species, including, for example, soft-shell turtle and crocodile (pers. comm. Ho Gia Anh Le, Nguyen Danh Chien). Respondents who reported having eaten wildmeat were then asked to recall details of up to five instances of consumption during the last twelve months.²

Multiple logistic regression facilitated by SPSS 14.0 was used to analyse the effects of multiple predictors on wildmeat consumption. For predictors where $\geq 5\%$ of data were missing (Family Income, Personal Income and Education) a non-response category was included. A greater number of events of consumption (n=390) than consumers (n=207), created within-person dependency when analysing total events, so a majority vote method was used to provide one representative score for Company and Setting per respondent to meet the independence assumption of regression analysis.

Semi-structured Interviews

Semi-structured interviews (SSIs) were conducted with known wildmeat consumers (n=39) as well as members of the public in central Hanoi (n=38). Wildmeat consumers were individuals identified through the structured survey willing to be contacted for further interview. Members of the public were approached in parks and other popular meeting places in central Hanoi in the late afternoon and early evening.

SSIs are conducted using an interview guide derived from unstructured work, but which allows room for both interviewer and interviewee to follow leads (Bernard 2006); they are not structured interviews (i.e., questionnaires) in which each interviewee is asked exactly the same question. Recognising that statistical generalisation is but one means by which research design can seek to represent the population, unstructured or semi-structured interviews focus on a relatively

small set of informants, seeking in-depth understanding of particular sub-groups and of the underlying processes, values and relationships that contribute to specific outcomes (Drury *et al.* 2010).

All the SSIs were completed in Vietnamese with an interpreter, unless otherwise stated. Each lasted 40 to 60 minutes and was recorded and transcribed within a fortnight by the interpreter present. Analysis was facilitated by N6 software, a qualitative data research tool used to code and analyse interviews. Interviewees were encouraged to pursue their own narrative within the interview guide.³ Analysis aimed to be informant-led and fully grounded in the data (Weiss 1994). Unless otherwise stated, the quotes presented reflect the dominant themes emerging.

RESULTS

Scale of Consumption

Over a fifth (22.6%) of respondents surveyed reported consuming wildmeat in the last twelve months—the majority reporting just one instance of consumption—and 18% reported consuming bear bile in the same period. A relatively small proportion of respondents (5.7%) reported consuming a wild

animal product other than wildmeat or bear bile, i.e., alcoholic products, ornamental commodities (e.g., antlers, skulls, skins), bone glue. Wild pig (*Sus scrofa*) was the most common type of meat eaten, then soft-shell turtle and deer (Figure 1).⁴

Characteristics of Consumers

Multivariate analysis shows important differences between consumers of wildmeat and wild animal-derived medicines (Table 1).

Men are significantly more likely to report having eaten wildmeat in the last twelve months ($P < .01$); however, gender plays no significant role in consumption of wild animal-derived medicinal products (Table 1). Both men and women consider wildmeat a male food, typically associated with male activities such as drinking alcohol and, for some, using prostitutes (Box 1). Most female consumers interviewed had been invited to eat wildmeat by male colleagues, friends or family members and were generally less enthusiastic and less knowledgeable about wildmeat than male consumers.

Wildmeat consumption is significantly correlated to belonging to the highest family income ($P < .05$) and the second highest family income quartile ($P < .05$) compared to the lowest (Table 1). Family income had no significant influence

Table 1
Logistic regressions showing the role of respondent characteristics on consumption of
a) wildmeat and b) wild animal-derived medicines in the last 12 months

Predictor variables	a). Wildmeat			b). Wild animal-derived medicinal products			
	B (SE)	Sig.	Exp (B)	B (SE)	Sig.	Exp (B)	
Age (Years)	-0.01 (0.01)	0.47	1.00	0.02 (0.01)	0.02*	1.02	
Family income (Reference: Lowest-earning quartile)							
	Non-responses	0.47 (0.29)	0.11	1.60	0.04 (0.27)	0.88	1.04
	Second lowest-earning quartile	0.25 (0.36)	0.49	1.28	0.04 (0.33)	0.91	1.04
	Second highest-earning quartile	0.78 (0.33)	0.02*	2.18	0.43 (0.31)	0.16	1.54
	Highest-earning quartile	1.10 (0.33)	0.00**	3.01	0.51 (0.32)	0.11	1.67
Occupation (Reference: Service workers)							
	Armed forces/police	1.97 (1.18)	0.10	7.14	1.09 (1.04)	0.29	2.98
	Business people	1.22 (0.41)	0.00**	3.39	0.29 (0.42)	0.49	1.34
	Finance professionals	1.34 (0.46)	0.00**	3.81	-0.39 (0.54)	0.48	0.77
	Non-finance professionals	-0.47 (0.48)	0.32	0.62	-0.42 (0.43)	0.48	0.68
	Clerks	0.99 (0.58)	0.09	2.68	0.04 (0.62)	0.96	1.04
	Skilled workers	-0.21 (0.27)	0.46	1.37	0.13 (0.25)	0.62	1.13
	Unskilled workers	-0.03 (0.43)	0.94	0.81	0.34 (0.40)	0.39	1.41
	Unemployed	0.29 (0.59)	0.62	1.33	1.00 (0.56)	0.07	2.72
	Students	-0.27 (0.54)	0.61	0.76	-0.54 (0.57)	0.34	0.58
	Housework/Care	0.48 (0.52)	0.36	1.62	-1.84 (1.03)	0.08	0.16
	Retired	-0.07 (0.33)	0.84	9.36	-0.01 (0.29)	0.99	0.99
Sex (Reference: Women)		0.71 (0.20)	0.00**	2.04	-	-	-
Wildlife-related knowledge/awareness (Score)		-0.14 (0.04)	0.00**	0.86	-	-	-
Education (Reference: Not completed secondary education)							
	Non-responses	-	-	-	1.32 (0.59)	0.02*	3.75
	Completed secondary education	-	-	-	0.64 (0.24)	0.00**	1.90
	Completed higher education	-	-	-	0.96 (0.27)	0.00**	2.62
Constant		-1.15 (0.42)	0.00	0.32	-3.37 (0.54)	0.00	0.03

a) Wildmeat: Model $\chi^2(18) = 75.75$ $P < .01$. R^2 0.25 (Hosmer & Lemeshow), 0.09 (Cox & Snell), 0.13 (Nagelkerke); b) Wild Animal-derived medicinal products: Model $\chi^2(19) = 43.90$ $P < .01$. R^2 0.70 (Hosmer & Lemeshow), 0.05 (Cox & Snell), 0.07 (Nagelkerke). ** $P < .01$, * $P < .05$.

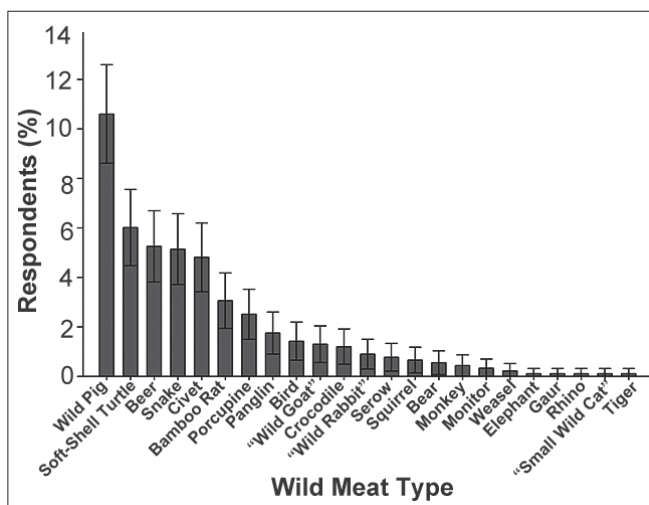


Figure 1

Percentage of respondents ($n=915$) who reported eating each wild meat type on at least one occasion in the last twelve months, showing 95% confidence intervals.⁵

on consumption of wild animal-derived medicinal products (Table 1). A high proportion (85%) of male respondents who reported a personal income of over 10m VND (~600USD) in the previous month⁶ reported eating wildmeat, thus demonstrating that it is also favoured among the highest earners. Correspondingly, most interviewees considered wildmeat an expensive speciality and perceived wealth as one of the main characteristics of consumers.

Business people ($P<.05$) and finance professionals ($P<.05$) are more likely to consume wildmeat than those in other occupations (Table 1). Although not significant, note that working in the armed forces or police ($n=4$) compared to working in the service industry has the highest odds ratio of all the occupation groups. Many interviewees also reported that government officials are significant wildmeat consumers. This contrasts with consumption of wild animal-derived medicinal products, on which occupation had no significant bearing. Interviewees strongly associated powerful individuals in high-status occupations, or 'successful' people, with eating wildmeat (Box 2).

Age is positively related to consumption of medicinal products⁷ ($P<.05$) but not of wildmeat. Interviewees considered wild animal-derived medicines such as bear bile and tiger glue to be products needed by older people whereas most emphasised social status and wealth when discussing consumers of wildmeat. Only a handful of interviewees perceived wildmeat to be chiefly eaten by older men but, when prompted, they also identified younger consumers. In fact, a 'fashion' or 'movement' for wildmeat was often talked about in particular reference to young men (Box 3).

Context of Consumption

Most (58.9%) instances of wildmeat consumption took place in restaurants. The proportion of consumers reporting consuming wildmeat in a restaurant, rather than in a private house, rises

Box 1

Wildmeat is a male food associated with male activities

Interviewee #28: They go to bars, they dance, and then they go to 'massage' centres [...] Maybe they go to a restaurant to eat wildmeat and then go to 'massage' together... it's a habit, an official ritual for the businessmen. Always they're singing karaoke, drinking beer, getting drunk.

High-earning male professional aged 25, who eats wildmeat at business occasions with work colleagues, describes men, particularly businessmen, celebrating.

Box 2

Interviewees strongly associate high status 'successful' individuals with eating wildmeat

Interviewer: Do you share or does one person pay?

Interviewee #18: We go in a group of about 30 people and a meal costs around 10 million VND. One of my friends pays. Some are very rich. Some like me are poor. Richer friends don't mind paying the bill for the others. One works for the Vietnam Petrol Corporation, one works for the National Department of Planning and Investment, one works at the Ho Chi Minh City Television Station. Some are managers or heads of department, etc. They are successful people.

Semi-retired male wildmeat consumer aged 58.

Box 3

Wildmeat is eaten by all age groups and a 'fashion' for wildmeat is often made in particular reference to young men

Interviewer: 'What are the other patrons like?'

Interviewee #18: Most patrons are middle-aged: they are 40, 50 years old [...]; have settled their careers; have more friends and more opportunities to enjoy their lives; and have money. They often go to Hoa Lac [...] for wildlife dishes at weekends. They often buy live animals and have [them] slaughtered. We too.

Interviewer: Do you ever see young people eating wildmeat?

Interviewee #18: I see many. [They go] mostly for fun, they follow each other to try wildmeat dishes. It is a waste of money. [...] They may follow a 'fashion' of eating wildmeat [...]. I think it is a new fashion.

Semi-retired male wildmeat consumer aged 58.

significantly between increasing personal income quartiles ($\chi^2[3]=15.02, P<.01$).

Interviewees, including those who had never eaten wildmeat, frequently referred to wildmeat as rare (*hiém*) and precious (*quý*). As a rare and precious food, eating wildmeat and inviting others to eat it is a means of publicly demonstrating wealth and status. Wildmeat is also considered fashionable and associated with leading a luxurious way of life, important in Hanoi where a projected image is critical to social success (Box 4).

As a rare and expensive food, interviewees described wildmeat being used to show respect and demonstrate competence when negotiating deals and initiating new business relations. Exchanges of rare wild animal products were also used to influence and obtain preferential treatment from those in positions of power (Box 5). Some interviewees, often those working for financial institutions, also suggested that those who have the opportunity take advantage of company or public funds to access wildmeat for both business and at non-formal company outings and celebrations.

Box 4**Wildmeat is considered fashionable and associated with leading a luxurious way of life**

Interviewer: So you think meat consumption is rising in general?

Interviewee #38: It's rising enormously. But wildmeat, I don't think a lot of people can have access to wildmeat: very expensive. And I think some so-called 'yuppie' people now they want to show-off their wealth so they get into their car and they can go to the forest and to the places outside Hanoi just to eat these things [...] sometimes it's just the matter of having the experience of eating something that's denied to others; you are privileged, you have the money to buy this; sometimes it's just a matter of status.

Male professor and wildmeat consumer aged 51, interviewed in English.

Box 5**Exchanges of rare wild animal products are used to influence and obtain preferential treatment from those in positions of power**

Interviewer: On what kinds of occasions do people go to eat special dishes?

Interviewee #25: Maybe when [...] someone wants to invite other people out to ask them for a big favour then people will choose something very special or expensive to invite each other to eat [...] Sometimes people buy it for work, as a form of bribery.

High-earning businessman and wildmeat consumer aged 56.

Interviewer: When your uncle eats special dishes, is it just for fun?

Interviewee #17: He is a state official going on business to southern Vietnam, so he is invited. So he goes to restaurants for business [...] He goes to inspect the performances by local officials so he is invited by the local officials [...]. They think wildmeat is rare and precious [...] something precious to serve distinguished guests.

High-earning male skilled worker aged 25, wildmeat consumer.

Box 6**Consumers feel obliged to invite others to eat wildmeat leading them to stress the need to reduce the supply of wildmeat in order to reduce its consumption**

Interviewer: Why do you think wildmeat is popular for business deals?

Interviewee #39: [...] wildmeat is something special and delicious, so I invite people to try. I'm aware that eating wildmeat is not good, but it is not easy to choose any other food. The government should do something to prevent the wildlife hunting first and stop restaurants from serving wildmeat dishes. Then it may stop people from eating the dishes [...] when no restaurants sell wildmeat, we don't have to go for wildmeat.

High-earning businessman aged 50, wildmeat consumer.

Box 7**Consumers wish to try 'traditional' wild meat specialties when travelling somewhere new; some also travel in order to eat wild meat dishes**

Interviewer: When you go out for wildmeat, do you eat in Hanoi or elsewhere?

Interviewee #29: Both in Hanoi and other places [...]. I eat wildmeat in other places more than in Hanoi because each area has its own specialties [...] when we go on a picnic, we want to taste specialties in the place we go to, and we want to see whether the dishes are different from those cooked in Hanoi. And people have often prepared dishes for us in the place where we have a holiday or picnic.

Male professional aged 31, wildmeat consumer.

Interviewee #39: I rarely go to try wildmeat, but if I do, I will go to Hoa Binh. If I want to try snake, I will go to Gia Lam district of Hanoi. [In Hoa Binh] my friends and I had some meat from a leopard cat or a wild cat [...]. There are many restaurants in Hoa Binh. If you want to try special dishes you can phone a restaurant to book in advance. You have to wait until the restaurant finds the rare animals you order and they call you to come.

Businessman and wildmeat consumer aged 50.

Some consumers emphasised that they have limited control over their consumption: A couple of those interviewed even reported powerful individuals demanding to be served wildmeat. This made them stress the importance of reducing supply as opposed to seeking to influence consumption behaviour (Box 6).

'Friends' (44.9%) was the most common category of company with which wildmeat was reported eaten, followed by 'Family Members' (38.7%) and 'Colleagues' (16.9%). Multivariate analysis (Table 2) shows men are more likely than women ($P < .01$) to eat wildmeat with friends while women are more likely ($P < .01$) to do so with family members. Consumers belonging to the highest ($P < .01$) and second highest ($P < .05$) family income quartiles were less likely to eat wildmeat with relatives than those in the lowest quartile. Finally, professionals and business people ($P < .01$) were more likely to report eating with colleagues; note also the high odds ratio of working in the armed forces/police.

Unsurprisingly, most wildmeat consumption (41.3%) took place around Hanoi; the remainder occurred in 22 different provinces, but predominantly in Ha Tay (11.6%). It is considered customary to try local or traditional specialties when travelling somewhere new, and tourists are keen to try something they would not ordinarily eat (Box 7). Although for many consumers, visiting other areas—particularly forested and mountainous areas—is synonymous with eating wildmeat, it is often unclear whether eating wildmeat or sightseeing is the main objective of the trip. Certainly, some consumers interviewed reported travelling specifically to eat wildmeat (Box 7).

The context of wildmeat consumption has changed considerably over the last 25 years. Rather than hunting wild animals for subsistence during the 1970s and 1980s, as most commonly reported by questionnaire respondents asked about past consumption instances, consumers are now paying above the odds for the meat of wild animals in urban restaurant settings. At the time of the study, interviewees widely considered eating wildmeat to be a new trend related to increasing affluence.

DISCUSSION**Demand for Wildmeat**

That wildmeat is the dominant form of wild animal consumption among residents of central Hanoi corresponds

Table 2
Logistic regressions showing the role of respondent characteristics on the company (friends/other, colleagues/other or family/other) reported at wildmeat consumption events in the last 12 months

Predictor variables		Company								
		a) Friends			b) Colleagues			c) Family		
		B (SE)	Sig.	Exp (B)	B (SE)	Sig.	Exp (B)	B (SE)	Sig.	Exp (B)
Age (years)		-0.02 (0.01)	0.06	0.98	-0.02 (0.02)	0.37	0.98	0.02 (0.11)	0.07	1.02
Sex (Reference: women)	Men	-1.10 (0.32)	0.00**	2.99	0.50 (0.52)	0.34	1.64	-1.14 (0.32)	0.00**	0.32
Personal income (Reference: Lowest-earning quartile)	Non-responses							-0.76 (0.63)	0.22	0.47
	Second lowest-earning quartile							-0.39 (0.48)	0.41	0.68
	Second highest-earning quartile							-1.13 (0.54)	0.02*	0.28
	Highest-earning quartile							-1.14 (0.32)	0.00**	0.32
Family income (Reference: Lowest-earning quartile)	Highest-earning quartile	-0.40 (0.55)	0.47	0.67	-1.13 (0.81)	0.17	0.32			
	Second highest-earning quartile	0.86 (0.67)	0.20	2.37	-2.17 (1.27)	0.09	0.12			
	Second lowest-earning quartile	-0.44 (0.60)	0.47	0.64	-1.10 (0.92)	0.23	0.33			
	Non responses	-0.40 (0.58)	0.49	0.67	0.01 (0.80)	0.99	1.00			
Occupation (Reference: Service worker)	Armed forces/Police				2.67 (1.38)	0.05	14.47			
	Professional/Businessperson				1.59 (0.59)	0.00**	4.90			
	Clerk				0.73 (1.19)	0.54	2.07			
	Skilled worker				1.09 (0.63)	0.08	2.98			
	Unpaid occupation				-0.58 (0.86)	0.50	0.56			
Constant		0.14 (0.56)	0.08	1.15	-1.15 (0.99)	0.25	0.32	0.20 (0.55)	.72	1.22

Company: a) Model $\chi^2(6)$ 25.40 $P < 0.01$. R^2 0.11 (Hosmer & Lemeshow), 0.12 (Cox & Snell), 0.16 (Nagelkerke); b) Model $\chi^2(11)$ 36.24 $P < 0.01$. R^2 0.51 (Hosmer & Lemeshow), 0.17 (Cox & Snell), 0.28 (Nagelkerke); c) Model $\chi^2(6)$ 33.89 $P < 0.01$. R^2 0.53 (Hosmer & Lemeshow), 0.15 (Cox & Snell), 0.21 (Nagelkerke). * $P < 0.05$, ** $P < 0.01$.

with related research (Nguyen 2003; Venkataraman 2007). Recent surveys in China, which shares much cultural continuity with Vietnam, also found high proportions of urban residents reporting wildmeat consumption (Guo 2007; Zhang *et al.* 2008). Despite high overall proportions of respondents reporting wildmeat meals, both this study and studies in urban Vietnam and China (Wu *et al.* 2001 in Guo 2007; CWCA & WildAid 2005; Guo 2007; Venkataraman 2007) report relatively few consumers reported eating wildmeat regularly. This reflects the role of wildmeat as a relatively inaccessible 'luxury' product as opposed to an essential source of animal protein in the absence of alternatives.

It is extremely difficult to estimate the impact of demand from central Hanoi residents on wild populations based on the results presented here. While reporting of one civet might realistically be interpreted as the consumption of one animal, this assumption would not be reasonable for larger animals. Moreover, some proportion of the wildmeat reported consumed (particularly wild pig, snake and soft-shell turtle species) will have been farmed or ranched.

Nevertheless, the results demonstrate significant demand among central Hanoi residents for meat from a number of species of conservation concern. This provides an ongoing

incentive to harvest and trade threatened species, including wild individuals of the same species being bred in captivity. It is still less time-consuming and cheaper to source from wild populations (Guo 2007; Gratwicke *et al.* 2008; Brooks *et al.* 2010). Moreover, farmed equivalents are widely considered inferior (Drury 2009b) and, despite the availability of farmed wild products, significant demand for wild-sourced products persists. The spread of wildlife farming also appears to be encouraging existing consumers in Vietnam and China to place greater emphasis on wildness in order to communicate prestige (e.g., Shi & Parham 2000), resulting in some consumers going to great lengths to ensure the animals they select are wild and placing greater demands on those that cannot be, or are not currently being, bred in captivity (Drury 2009a, b).

Wildmeat being predominantly eaten in expensive, urban restaurant settings and being a highly social activity for those living in central Hanoi, mirrors other findings in China (Guo 2007; Xu *et al.* 2007; Li *et al.* 2008) and Vietnam (Venkataraman 2007). Venkataraman (2007: 12) also found that over two-thirds of Hanoi respondents believed eating wildmeat was 'popular' and 'fashionable', while the majority also thought wildmeat consumption in the city was increasing. Interviewees directly associated a new fashion for wildmeat

with rising wealth. This suggests that, as Vietnam continues to experience economic growth, demand for wildmeat will rise.

Premiums being paid for wildmeat, and wildmeat being enjoyed by a subsection of high-status urban consumers, has been observed elsewhere (e.g., Equatorial Guinea: East *et al.* 2005, Kumpel 2006; Ghana: Mendelson *et al.* 2003, Cowlshaw *et al.* 2005; Malawi, Mozambique and Zambia: Barnett *et al.* 2002; India: Hilaluddin & Ghose 2005). In major towns throughout Asia, Africa and the neotropics, Bennett (2002) reports wildmeat costing more than readily available domestic alternatives. In Gabon, Schenk *et al.* (2006) found only weak preferences for wildmeat based on taste tests, leading the authors to suggest that price or other values such as familiarity, tradition and prestige are shaping the demand for wildmeat. In the West also, game meat is historically linked with, and consumption of certain species still restricted to, elite groups (Jelliffe 1967; Fiddes 1992). Scarce and wild-sourced game and seafood is also currently typically more expensive, and associated with high-status consumers, compared to farmed alternatives (Evans 1996).

Nevertheless, although consumers of wildmeat in urban Equatorial Guinea comprise a wealthier section of society, East *et al.* (2005) conclude there is no evidence of a luxury market based on rare species. In Ghana, Cowlshaw *et al.* (2005) consider the higher price of wildmeat compared to domestic meat as resulting primarily from transport costs and its being in limited supply. Although Caspary (2001: 14) describes wildmeat becoming a 'deluxe' commodity in urban areas of West Africa, its price is comparable to beef. Moreover, Barnett (2002) observes demand for wildmeat in Eastern and Southern Africa, where wildmeat is cheaper than domestic alternatives, being driven primarily by affordability. Many researchers report wildmeat being exploited chiefly because it is the cheapest option in both African (Brashares *et al.* 2004; East *et al.* 2005; Wilkie *et al.* 2005) and neotropical (Apaza *et al.* 2002) countries. Remote households in northeast India, unable to access affordable alternatives, also chiefly depend on wildmeat for subsistence (Hilaluddin & Ghose 2005).

This clearly contrasts with Hanoi where consumers are willing to pay a significant premium for rare wildmeat, where wildmeat is considered superior to widely available domestic meats (Drury 2009b) and is strongly associated with wealth, success and high-status groups. It is possible that a growing Chinese expatriate population in many African countries, however, may influence demand for wildmeat.

Wildmeat Consumers

Men are dominant consumers of wildmeat in central Hanoi, corresponding to similar studies in urban Vietnam (e.g., SFNC 2003; Venkataraman 2007) and China (Wu *et al.* 2001 in Guo 2007; Guo 2007; Li *et al.* 2008). With limited options for leisure, drinking and paying for sex are now significant components of Vietnam's leisure industry, offering 'relaxation and adventure' for men with disposable incomes to spend on 'themselves, friends and work colleagues' (McNally 2003:

118). Eating wildmeat also appears to be a dimension of this trend: Both wildmeat restaurants and a small private zoo in Vietnam, for example, are associated with massage parlours, karaoke bars and female escort services (SFNC 2003; Robertson *et al.* 2004).

Wildmeat is considered heating or *yang* and as people age they need to eat more *yang* foods (Anderson & Anderson 1975). One would therefore expect consumption to be positively related to age. Yet Hanoian men of all ages are eating wildmeat, and consuming it is considered particularly fashionable among young men. Li *et al.* (2008: 1510) also report young men with disposable incomes being 'important' consumers of wildmeat in urban China. This result supports the finding that values of rarity and expense, rather than any perceived restorative or medicinal properties, are driving demand for wildmeat amongst Hanoians (Drury 2009b).

In contrast to wildmeat, bear bile—by far the most common wild animal-derived medicinal product used by Hanoians—is chiefly valued for its medicinal efficacy, its capacity to communicate prestige having been reduced due to increasing bear bile farms making it more accessible (Drury 2009a, b). This explains why, in contrast to consumption of wildmeat, income, occupation and gender are not related, and age is positively related, to the use of wild animal-derived medicinal products. The climb in consumption of wild animal-derived medicines with age not only arises from the need to treat specific symptoms of chronic age-related conditions but also from the perceived restorative and strength-giving properties of traditional medicines and tonics (Craig 2002). These medicines are considered valuable and effective by all age groups (Drury 2009a), suggesting that demand for wild animal-derived medicines is likely to grow alongside an expanding and increasingly elderly Hanoian population.

Income is consistently positively correlated with wildmeat consumption amongst Hanoians (Venkataraman 2007) and urban Chinese (e.g., Guo 2007; Li *et al.* 2008). An increasing Thai urban middle class is also reported to have sufficient income to be important consumers of Southeast Asian wildlife (World Bank 2005). This suggests that demand for wildmeat will grow along with rising urban wealth in the region, and that money is the main factor currently preventing individuals consuming wildmeat as opposed to attitudes or awareness of the impact of consumption (Harris 2008; Drury 2009a). While awareness-raising and social marketing are important tools in long-term conservation interventions, altering awareness and attitudes alone will therefore not offer rapid solutions to conserving already vulnerable species.

The results clearly show that businessmen and finance professionals—and strongly suggest that government officials too—are major consumers. Wildmeat restaurateurs also name businessmen and government officials as chief customers (SFNC 2003; Robertson 2004; Robertson *et al.* 2004). Venkataraman (2007: 13) also identifies 'entrepreneurs', individuals in management positions and government officials as important Vietnamese consumers of wild animal products generally, while a recent survey in China documents 'physical

workers, students, self-employed and freelancers' as significant urban consumers (Zhang *et al.* 2008: 1510). Neither study, however, presents results of regression analysis unravelling the effects of different explanatory variables on consumption.

Wildmeat as a Prestige Food

In central Hanoian society, wildmeat is a prestige food that plays important roles in social discourse, used to conspicuously reify differences in wealth and social status, and demonstrate respect and business competence. It is unsurprising then that respondents involved in business and finance are more likely to report eating wildmeat, and are also more likely to report eating wildmeat with colleagues. Those in high status positions serve wildmeat to assert their superior rank, and are also offered wildmeat by others aiming to buy their influence. Bank clerks, finance professionals and government officials are also more likely to have access to public and corporate accounts, which they use to access expensive foods they may otherwise be unable to afford.

Surprisingly, however, most of the instances when wildmeat was consumed were reported as recreational occasions shared with friends and family, rather than as business occasions or with colleagues. Consumers, rather than being merely driven to advertise their status, are also influenced by cultural norms to strive to meet a certain standard of decency in terms of the volume and grade of goods consumed, and to match personal consumption with that of peers of comparable means (cf. Veblen 1934; Douglas & Isherwood 1979). Such pressure is likely felt particularly acutely in Hanoi, where residents are especially status-conscious (Fforde 2003). Even at recreational events, a successful host will wish to strive to meet the standard expected of him by serving rare and expensive foods. Familiarity with wildmeat as a result of occupational access may also contribute to these individuals favouring it recreationally.

Among urban Chinese, researchers have also observed pressure to consume wildmeat (Guo 2007; Zhang *et al.* 2008). As a guest, refusing wildmeat is disrespectful and potentially insulting while, simultaneously, hosts are under pressure to show hospitality and to demonstrate wealth and rank (Guo 2007). Indeed, hosting feasts confers such social prestige in China that some will endure years of debt in order to be able to do so (Yang 1994). Even recreational meals amongst friends, therefore, are subject to expectations of reciprocity and of meeting a certain standard in terms of the foods consumed, especially in a society where social standing is so critical.

Additionally, the term 'Colleague' used in the questionnaire unfortunately did not encompass the many individuals who might use wildmeat to nurture useful social alliances. In urban China, for example, corrupt behaviour, although widespread, is rarely described as such, but is rather portrayed as the maintenance of beneficial 'friendships' (Stafford 2006: 49). In a related study of Hanoian population, Venkataraman (2007: 15) distinguishes between 'Colleagues' and 'Business Contacts' as response categories: This perhaps helps explain why,

compared to this study, it found fewer respondents reporting eating wildmeat with 'Friends' but a higher proportion eating with 'Business Contacts'.

As well as projecting self-image, feasting and eating out can also serve to transform informal sociability into important economic and political networks (Davis 2000; Hayden 2003). In contemporary China, the familiar language of exchange and reciprocity, and especially the sharing of food, is frequently used to develop useful social networks (Stafford 2006). Similarly, by hosting prestigious but apparently informal and recreational meals, including those on national holidays, Hanoians are building useful personal networks and gaining advantage from those with power. These events serve personally profitable ends no less than those explicitly described as formal business occasions, yet their superficially recreational nature serves to disguise their function and thus save face (Yang 1994). At such exchanges individuals feel obliged to serve sufficiently prestigious meals, not only to raise their own standing, but also to gain economic and social advantage to a sufficient level to oblige their guest to reciprocate accordingly; as the results show, powerful recipients will even demand to be served certain foods.

Individuals in collective societies with interdependent self-concepts are more inclined to conform to social norms and be concerned about losing face within the groups with which they identify (Wong & Ahuvia 1998). Refusing to consume or to serve wildmeat is likely, therefore, to be seen as putting personal preferences before group objectives and to potentially entail a loss of face.

Wildmeat Tourism

The role wildmeat plays in celebrations and festivals is unsurprising given that, around the world, foods consumed on special occasions are 'frequently of animal origin [...] expensive and relatively rare' (Jelliffe 1967: 279-80). The part of wild animal consumption in tourism, among both Asian and European tourists, is also not novel (Highley & Highley 1994 in Nooren & Claridge 2000; Hoffman *et al.* 2003 in Hoffman & Wiklund 2006). But the wide range of locations reported by Hanoians for wildmeat consumption reflects one of the most significant changes resulting from economic revitalisation in the country, that of increased mobility (Thomas & Drummond 2003; Truitt 2008). The opportunities provided by newly mobile domestic tourists have been fully exploited by the locals (Soucy 2003) and the creation and marketing of expensive 'traditional specialities' by savvy entrepreneurs has contributed to the availability of wildmeat around popular tourist destinations.

Although presented as authentic, it is recognised that many traditions are often more recent inventions created to serve modern purposes, particularly during rapid social-economic transformation when the need to reformulate identity is strongest (Hobsbawm & Ranger 1992). That traditional wild animal-based foods and medicines are being reinvented for economic gain in China has already been noted (Lo 2005).

Mass pilgrimages to religious sites, during which wildmeat meals are often eaten, are a new phenomenon enabled by recently heightened mobility and religious freedom (Taylor 2004); they also respond to a need to assert identity in an increasingly global society (Soucy 2003). While wildmeat specialties at tourist sites may be testament to the entrepreneurial talents of local people, they may also result from a need to reinforce identity in a rapidly changing socio-economic context. Increasingly, urban Vietnamese are romanticising rural life and the countryside (Drummond 2003), and eating wildmeat may be a way for urbanites to reconnect with their perceived traditional, rural past. Nostalgia for a lost cultural history, real or supposed, and the need to forge a cultural identity in foreign surroundings might also help to explain demand for wildmeat among some African immigrants in cities such as New York and Paris (Milius 2005).

CONCLUSIONS AND RECOMMENDATIONS

There is significant demand amongst central Hanoians for meat from a number of species of conservation concern. This provides an ongoing incentive to harvest and trade vulnerable species, including those that are being bred in captivity. However, it is still less time-consuming and cheaper to source from wild populations with farmed equivalents being widely considered as inferior. Moreover, as Vietnam's economy grows and its population ages, demand for wildmeat and for medicinal wild animal products is likely to grow. Monitoring trade in, and farming of, species from which these products are derived, and addressing consumer demand where it drives unsustainable harvesting of species of conservation concern should therefore be a priority.

Interventions seeking to reduce consumer demand for wildmeat among residents of central Hanoi should target successful, high-income and high-status male audiences of all ages and education levels; and should also focus on recreational consumption as well as that in more formal business contexts. Actions should be timed to coincide with national holidays and festivals when demand is greatest, and should target restaurants in and around urban centres and popular destinations for urban tourists.

Given the difficulties of acting on personal rather than collective interests and the highly symbolic roles fulfilled by wildmeat in social discourse in an extremely status-conscious society, reducing its consumption is extremely challenging. Stemming demand requires either major shifts regarding the importance of status, or at least the roles of consumption in demonstrating status, in Hanoian society; or, more plausibly, a reduction in the symbolic values of wildmeat, thus undermining its role as a medium for communicating prestige.

Interventions seeking to influence consumer behaviour must be informed by an in-depth understanding, achieved using appropriate methods, of the social drivers of consumer demand for wild animal products, and involve relevant expertise such as social marketing.

In the meantime, where wild products are valued primarily for their rarity and expense and where those who consume them are considered superior, it is likely that only strengthened regulation and enforcement will prevent demand being met by consumers prepared to pay the rising costs of finding the last individuals of a species (Courchamp *et al.* 2006). This will also serve to reinforce longer-term interventions seeking to reduce unsustainable levels of consumer demand for species of conservation concern.

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Notes

1. For further details of sampling method, see Drury 2009b.
2. The questionnaire is available from the author on request.
3. The interview guide can be found in Drury 2009b.
4. Among those who reported consuming deer: 3.0% of respondents specified eating *nai* the meaning of which encompasses sambar deer (*Cervus unicolor*), brown-antlered deer (*Cervus eldi*) and hog deer (*Axis procinus*), 1.4% specifically identified *huong* meaning muntjac (*Muntiacus* spp.), and 0.8% selected *huou*, including sika deer (*Cervus nippon*) and musk deer (*Moschus chrysogaster*) (Weitzel 2008). For further details of species reported consumed see Drury 2009b.
5. Respondent's definitions of wild are used. Respondents who report eating 'wild birds' may be referring to jungle fowl (*Gallus gallus*) to which many interviewees refer specifically. Respondents who report eating 'wild goat' may be referring either to recently introduced domestic goat varieties perhaps considered by some consumers as 'wild' due to their relative novelty; it is also possible that some respondents are referring to serow (*Capricornis* spp) which a few interviewees report consuming. Respondents who report eating 'wild rabbit' are likely to be referring to wild hares (*Lepus* spp.) but may be referring to domestic rabbits, perhaps defining these as wildmeat since they are not commonly eaten.
6. Questionnaire respondents were asked to report their personal and family income in the last month. See Drury 2009b for details.
7. For more details of medicinal products included in the analysis, see Drury 2009b.

REFERENCES

- Anderson, E.N. and M.L. Anderson. 1975. Folk dietetics in two Chinese communities and its implications for the study of Chinese medicine. In: *Medicine in Chinese cultures: Comparative studies of healthcare in Chinese and other societies* (eds. Kleinman, A., P. Kunstadter, R. Alexander and J.L. Gale). Pp. 145–175. Washington, DC: Fogarty International Center.
- Apaza, L., D. Wilkie, E. Byron, T. Huanca, W. Leonard, E. Perez, V. Reyes-Garcia, V. Vadez and R. Godoy. 2002. Meat prices influence the consumption of wildlife by the Tsimane' Amerindians of Bolivia. *Oryx* 36(4): 382–388.
- Bakarr, M.I., O. Ampadu-Agyei, E. Adomako, R. Ham, S. Mainka and M.

- Trivedi. 2002. Bushmeat utilisation, human livelihoods and conservation of large mammals in West Africa. In: *Links between biodiversity, conservation, livelihoods and food security: The sustainable use of wild species for meat*. Occasional Paper of the Species Survival Commission number 24 (eds. Mainka, S. and M. Trivedi). Pp. 45–53. Gland, Switzerland and Cambridge, UK: IUCN.
- Barnett, R., S. Mainka and M. Trivedi. 2002. Wildmeat utilisation in the eastern and southern Africa region. In: *Links between biodiversity, conservation, livelihoods and food security: The sustainable use of wild species for meat*. Occasional Paper of the Species Survival Commission Number 24 (eds. Mainka, S. and M. Trivedi). Pp. 55–61. Gland, Switzerland and Cambridge, UK: IUCN.
- Bennett, E. 2002. Is there a link between wild meat and food security? *Conservation Biology* 16(3): 590–592.
- Bennett, E.L. and M. Rao. 2002. *Hunting and wildlife trade in tropical and sub-tropical Asia: Identifying gaps and developing strategies*. Report of a meeting held in Khao Yai National Park, Thailand. Bangkok: Wildlife Conservation Society.
- Bernard, H.R. 2006. *Research methods in anthropology*. 4th edition. Lanham and Oxford: AltaMira Press.
- Bowen-Jones, E., D. Brown and E.J.Z. Robinson. 2003. Economic commodity or environmental crisis? An interdisciplinary approach to analysing the bushmeat trade in central and west Africa. *Area* 35(4): 390–402.
- Brashares, J.S., P. Arcese, M.K. Sam, P.B. Coppolillo, A.R. Sinclair and A. Balmford. 2004. Bushmeat hunting, wildlife declines, and fish supply in West Africa. *Science* 306(5699): 1180–1183.
- Brooks, E.G.E., S.I. Robertson and D.J. Bell. 2010. The conservation impact of commercial wildlife farming of porcupines in Vietnam. *Biological Conservation* 143: 2808–2814.
- Caspary, H.U. 2001. Regional dynamics of hunting and bushmeat utilization in West Africa - An overview. In: *Hunting and bushmeat utilization in the African rain forest* (eds. Bakarr, M.I., G.A.B. da Fonseca, C.G. Mittermeier, A.B. Rylands and K.M. Painemilla). Pp. 11–16. Washington, DC: Conservation International.
- Compton, J. and H.Q. Le. 1998. *Borderline: A report on wildlife trade in Vietnam*. Hanoi: WWF Indochina Programme.
- Courchamp, F., E. Angulo, P. Rivalan, R.J. Hall, L. Signoret, L. Bull and Y. Meinard. 2006. Rarity value and species extinction: The anthropogenic allee effect. *PLoS Biology* 4(12): 2405–2410.
- Cowlishaw, G., S. Mendelson and J.M. Rowcliffe. 2005. Structure and operation of a bushmeat commodity chain in southwestern Ghana. *Conservation Biology* 19(1): 139–149.
- Craig, D. 2002. *Familiar medicine: Everyday knowledge and practice in today's Vietnam*. Honolulu: University of Hawai'i Press.
- CWCA and WildAid. 2005. *Report on the survey of wildlife consumption and public attitudes to wildlife consumption in China*. Beijing: China Wildlife Conservation Association/WildAid.
- Davis, D.S. 2000. Introduction: A revolution in consumption. In: *The consumer revolution in urban China* (ed. Davis, D.S.). Pp. 1–22. Berkeley: University of California Press.
- de Merode, E., K. Homewood and G. Cowlishaw. 2004. The value of bushmeat and other wild foods to rural households living in extreme poverty in Democratic Republic of Congo. *Biological Conservation* 118(5): 573–581.
- de Plessis, M.A., J.M. Hutton and B. Dickson 2000. CITES and the causes of extinction. In: *Endangered species, threatened convention - The past, present and future of CITES*. London: Earthscan.
- Donovan, D. 2004. Cultural underpinnings of the wildlife trade in Southeast Asia. In: *Wildlife in Asia: Cultural perspectives* (ed. Knight, J.). Pp. 88–111. London and New York: RoutledgeCurzon.
- Douglas, M. and B. Isherwood 1979. *The world of goods: Towards an anthropology of consumption*. London and New York: Routledge.
- Drummond, L.B.W. 2003. Popular television and images of urban life. In: *Consuming urban culture in contemporary Vietnam* (eds. Drummond, L.B.W. and M. Thomas). Pp. 155–169. London: RoutledgeCurzon.
- Drury, R. 2009a. Understanding and identifying urban consumers of wild animal products in Hanoi, Vietnam: Implications for conservation management. Ph.D. thesis. University College London, London, UK.
- Drury, R. 2009b. Reducing urban demand for wild animals in Vietnam: Examining the potential of wildlife farming as a conservation tool. *Conservation Letters* 2:263–270.
- Drury, R., K. Homewood and S. Randall. 2010. Less is more: Qualitative and quantitative approaches in conservation research. *Animal Conservation* 14(1):18–24.
- Duckworth, J.W., R.E. Salter and K. Khounboline. 1999. Wildlife in Lao PDR: 1999 status report. Vientiane, Lao PDR: IUCN.
- East, T., N.F. Kumpel, E.J. Milner-Gulland and J.M. Rowcliffe. 2005. Determinants of urban bushmeat consumption in Rio Muni, Equatorial Guinea. *Biological Conservation* 126:206–215.
- Evans, M.I. 1996. A contextual classification of “intrinsically wild” food species. *Biopolicy Journal* 1 (1), Paper 3
- Fa, J.E., C.A. Peres and J. Meeuwig. 2002. Bushmeat exploitation in tropical forests: An intercontinental comparison. *Conservation Biology* 16(1): 232–237.
- Fforde, A. 2003. Vietnam - Culture and economy: Dyed-in-the-wool tigers? In: *Consuming urban culture in contemporary Vietnam* (eds. Drummond, L.B.W. and M. Thomas). Pp. 35–59. London: RoutledgeCurzon.
- Fiddes, N. 1992. *Meat: A natural symbol*. London and New York: Routledge.
- General Statistics Office of Vietnam. 2006. *Socio-economic statistical data of 671 districts, towns and cities under the authority of provinces in Vietnam*. Hanoi: S.P. House.
- Gratwicke, B., E.L. Bennett, S. Broad, S. Christie, A. Dutton, G. Gabriel, C. Kirkpatrick and K. Nowell. 2008. The world can't have wild tigers and eat them, too. *Conservation Biology* 22(1): 222–223.
- Guo, Y. 2007. Behaviours, attitudes and values of wild meat consumers in Ghangzhou, China. M. Sc. thesis. University of Oxford, Oxford, UK.
- Harris, R.B. 2008. *Wildlife conservation in China: Preserving the habitat of China's wild west*. New York and London: East Gate Books.
- Hayden, B. 2003. Were luxury foods the first domesticates? Ethnoarchaeological perspectives from Southeast Asia. *World Archeology* 34(3): 458–469.
- Highley, K. and S.C. Highley. (1994). Bear farming and trade in China and Taiwan. www.earthtrust.org/bear.html. Accessed on December 2, 2008.
- Hilaluddin, R.K. and D. Ghose. 2005. Conservation implications of wild animal biomass extractions in Northeast India. *Animal Biodiversity and Conservation* 28(2): 169–179.
- Hobsbawm, E. and T. Ranger 1992. *The invention of tradition*. Cambridge: Cambridge University Press.
- Hoffman, L.C., K. Crafford, M. Muller and D.W. Schiutte. 2003. Perceptions and consumption of game meat by a group of tourists visiting South Africa. *South African Journal of Wildlife Research* 33: 125–130.
- Hoffman, L.C. and E. Wiklund. 2006. Game and venison – the meat for the modern consumer. *Meat Science* 74: 197–208.
- Jambiya, G., S.A.H. Milledge and N. Mtango. 2007. 'Night time spinach': Conservation and livelihood implications of wild meat use in refugee situations in north-western Tanzania. Dar es Salaam: TRAFFIC East/Southern Africa.
- Jelliffe, D.B. 1967. Parallel food classifications in developing and industrialised countries. *American Journal of Clinical Nutrition* 20(3): 279–281.
- Kaul, R., J.S. Hilaluddin, J.S. Jandrotia and P.J.K. McGowan. 2004. Hunting of large mammals and pheasants in the Indian western Himalaya. *Oryx* 38(4): 426–431.
- Kumpel, N.F. 2006. Incentives for sustainable hunting of bushmeat in Rio Muni, Equatorial Guinea. Ph.D. thesis. Imperial College and Institute of Zoology, Zoological Society of London, London, UK.
- Leon, P. and S. Montiel. 2008. Wild meat use and traditional hunting practices in a rural Mayan community of the Yucatan peninsula, Mexico. *Human Ecology* 36: 249–257.

- Li, Z., H. Ning and S. Shan. 2008. Wildlife trade, consumption and conservation awareness in Southwest China. *Biodiversity and Conservation* 17: 1493–1516.
- Lin, J. 2005. Tackling Southeast Asia's illegal wildlife trade. *Singapore Year Book of International Law and Contributors* 9: 191–208.
- Lo, V. (2005). Pharmacology, food and medicine in China. Lecture Series: 1–22. The Wellcome Trust Centre for the History of Medicine at University College London, UK.
- Matthews, S.H. 2005. Crafting qualitative research articles on marriages and families. *Journal of Marriage and Family* 67(November 2005): 799–808.
- McGowan, P., W. Duckworth, X. Wen, S. van Balen, X. Yang, M. Khan, S. Hawa Yatim, L. Thanga, I. Steiwan and R. Kaul. 1998. A review of the status of the green peafowl *Pavo muticus* and recommendations for future action. *Bird Conservation International* 8: 331–348.
- McNally, S. 2003. *Bia om* and karaoke: HIV and everyday life in urban Vietnam. In: *Consuming urban culture in contemporary Vietnam* (eds. Drummond, L.B.W. and M. Thomas). Pp. 110–122. London: RoutledgeCurzon.
- Mendelson, S., G. Cowlshaw and J.M. Rowcliffe. 2003. Anatomy of a bushmeat commodity chain. *Journal of Peasant Studies* 31(1): 73–100.
- Milius, S. 2005. Bushmeat on the menu: Untangling the influences of hunger, wealth, and international commerce. *Science News* 167(9): 138–140.
- Nguyen, S.V. 2003. Wildlife trading in Vietnam: Why it flourishes. EEPSEA Research Reports, Tanglin, Singapore. 1–75.
- Nguyen, S.V. 2008. Wildlife trading in Vietnam: Situation, causes and solutions. *Journal of Environment and Development* 17: 145–165.
- Nooren, H. and G. Claridge 2000. *Wildlife trade in Laos: The end of the game*. Amsterdam: Netherlands Committee for the IUCN.
- Peres, C.A. 2000. Effects of subsistence hunting on vertebrate community structure in Amazonian forests. *Conservation Biology* 14(1): 240–253.
- Rabinowitz, A. 2001. *Beyond the last village: A journey of discovery in Asia's forbidden wilderness*. Washington, DC: Island Press.
- Robertson, S. 2004. *An assessment of the threats to the biodiversity of Phnong Nha-Ke Bang National Park, Quang Binh Province, Vietnam*. Hanoi: Fauna & Flora International.
- Robertson, S., V.T. Huyen, N.N. Nguyen, L. Ho, H.S. Le, Q. Nguyen, N.A. Vu, V.D. Le, X.T. Hoang, N. Vu, T and B. Long. 2004. The illegal wildlife trade in Quang Nam Province: Covert investigations by specially trained forest rangers. Hanoi: Quang Nam Forest Department & WWF Indochina.
- Schenck, M., E.N. Effa, M. Styarkey, D. Wilkie, K. Abernethy, P. Telfer, R. Godoy and A. Treves. 2006. Why people eat bushmeat: Results from two-choice taste tests in Gabon, Central Africa. *Human Ecology* 34(3): 433–445.
- SFNC. 2003. *Hunting and trading wildlife: Investigation into the wildlife trade in and around Pu Mat National Park, Nghe An province, Vietnam*. Social Forestry and Nature Conservation in Nghe An Province Project, Vinh City, Vietnam.
- Shi, H. and J.F. Parham. 2000. Preliminary observations of a large turtle farm in Hainan province, People's Republic of China. *Turtle and Tortoise Newsletter* 3: 4–6.
- Soucy, A. 2003. Pilgrims and pleasure-seekers. In: *Consuming urban culture in contemporary Vietnam* (eds. Drummond, L.B.W. and M. Thomas). Pp. 125–137. London: RoutledgeCurzon.
- Stafford, C. 2006. Deception, corruption and the Chinese ritual economy. In: *Consuming China: Approaches to cultural change in contemporary China* (eds. Latham, K., M. Thompson and J. Klein). London and New York: Routledge.
- Taylor, P. 2004. *Goddess on the rise: Pilgrimage and popular religion in Vietnam*. Honolulu: University of Hawai'i Press.
- Thomas, M. and L.B.W. Drummond. 2003. Introduction. In: *Consuming urban culture in contemporary Vietnam* (eds. Drummond, L.B.W. and M. Thomas). Pp. 1–18. London: RoutledgeCurzon.
- TRAFFIC. 2008. What's driving the wildlife trade? A review of expert opinion on economic and social drivers of the wildlife trade and trade control efforts in Cambodia, Indonesia, Laos and Vietnam. Washington, DC.
- Truitt, A. 2008. On the back of a motorbike: Middle-class mobility in Ho Chi Minh City, Vietnam. *American Ethnologist* 35(1): 3–19.
- Veblen, T. 1934. *The theory of the leisure class*. New York: Random House Inc.
- Venkataraman, B. (Comps) 2007. *A matter of attitude: The consumption of wildlife products in Hanoi, Viet Nam*. Hanoi: TRAFFIC Southeast Asia Greater Mekong Programme.
- WCS. 2008. *Commercial wildlife farms in Vietnam: A problem or a solution for conservation?* Hanoi: Wildlife Conservation Society.
- Weiss, R.A. 1994. *Learning from strangers: The art and method of qualitative interview studies*. New York: Free Press.
- Weitzel, V. 2008. Mammal List. <http://coombs.anu.edu.au/~vern/hnu/mammal-list.txt>. Accessed on July 24, 2008.
- Wilkie, D., M. Starkey, K. Abernethy, E. Nstame Effa, P. Telfer and R. Godoy. 2005. Role of prices and wealth in consumer demand for bushmeat in Gabon, Central Africa. *Conservation Biology* 19(1): 268–274.
- Wong, N.Y. and A.C. Ahuvia. 1998. Personal taste and family face: Luxury consumption in Confucian and Western societies. *Psychology & Marketing* 15(5): 423–441.
- World Bank. 2005. *Going, going, gone: The illegal trade in wildlife in East and Southeast Asia*. Washington, DC: The World Bank.
- Wu, Y., Z. Yi, C. Fu, K. Ye and X. Bi. 2001. Analysis on the wildlife-eating condition in Guangzhou City after investigation. *Journal of Guangzhou University (Science Edition)* 15(2): 93–96.
- Xu, L., M. Meng and F. Yin 2007. The wild meat trade in southern China. In: *The state of wildlife trade in China: Information on the trade in wild animals and plants in China 2007* (eds. Xu, H. and C. Kirkpatrick). Beijing: TRAFFIC East Asia Programme.
- Yang, M.M. 1994. *Gifts, favors and banquets: The art of social relationships in China*. London: Cornell University Press.
- Zhang, L.J., H. Ning and S. Shan. 2008. Wildlife trade, consumption and conservation awareness in Southwest China. *Biodiversity and Conservation* 17: 1493–1516.