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2

Habituating primates: processes, techniques, variables and ethics

INTRODUCTION

Field biologists adopted the term habituation from physiology, as the relatively persistent waning of a response as a result of repeated stimulation that is not followed by any kind of reinforcement (Thorpe, 1963). Repeated neutral contacts between primates and humans can lead to a reduction in fear, and ultimately to the ignoring of an observer. Historically, the techniques and processes involved were rarely described, as habituation was generally viewed as a means to an end (Tutin & Fernandez, 1991). As we become increasingly aware of the potential effects of observer presence on primate behaviour, and especially the potential risks of close proximity with humans, it behoves us to measure as much about the habituation process as possible. However, most recent studies that have quantified primate behaviour in relation to habituators have focussed on great apes (see, for example, Ando *et al.*, 2008; Bertolani & Boesch, 2008; Blom *et al.*, 2004; Cipolletta, 2003; Doran-Sheehy *et al.*, 2007; Sommer *et al.*, 2004; Werdenich *et al.*, 2003), with little information available for other primate taxa (but see Jack *et al.*, 2008).

There are limits to what studies of unhabituated primates can achieve: it is difficult to observe at close range, so subtle or cryptic behaviour such as facial expressions and soft vocalizations may be missed, and even individual identification may be difficult, resulting in analyses based only on age–sex classes. Primates disturbed by the presence of observers will show altered patterns of behaviour and it may not be possible to follow groups on the move. Habituation enables you to approach closely, because subjects no longer flee and do not respond overtly to observers, allowing you to become familiar with individuals, and to observe fine-level behaviours such as subtle social

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interactions or food processing. You can then sample behaviour consistently (Chapter 11). However, there are costs to habituation, borne largely by the animals themselves, including increased risks of disease (Köndgen *et al.*, 2008; Chapters 1 and 8, this volume), changes in behavioural ecology and increased vulnerability to poaching (see 'Ethical issues' below).

In this chapter we examine habituation methods, factors affecting the success of habituation, and associated ethical issues. Many behavioural responses are taxon-specific, and these should be taken into account when habituating human-naïve wild primates. We have first-hand experience with a range of primates, from marmosets (*Callithrix* spp.) to gorillas (*Gorilla* spp.), which we have used to make this chapter as broadly applicable as possible.

METHODS

Preparation

Knowing your primate

To prepare for a study involving primates, first read as much about your target species and its environment as possible to see what others have achieved. Familiarize yourself with your species' basic behavioural repertoire. Second, try to get exposure to the species itself, perhaps by visiting a zoo to observe the animals directly. The more naturalistic the physical and social environment of the captive primate, the better its potential as a model for wild conspecifics. Spending time observing captive primates will increase your familiarity with their basic locomotor patterns and postures, facial expressions and other behaviours, including foraging and food processing, grooming, play, reproductive and agonistic interactions. Pay particular attention to vocalizations, since these may help you to locate wild primates and to interpret behaviour in the absence of clear observation. Concentrate on alarm and display behaviours too, as these are likely to be the initial responses to human presence. Observing captive primates will also provide an opportunity to learn to distinguish individuals and will give you a head start in recognizing primates in the wild.

Equipment

In the early stages, you need little equipment: binoculars, a notebook, a compass, maps and a GPS (Chapter 4). Use binoculars and

cameras with care, as pointing a big 'eye' at primates can make them uneasy.

Using a trail system

Trails can facilitate movement within the study area and make it easier to follow primate groups, but this depends greatly on vegetation type and even more on the area to be covered, which will be determined by home-range size. For example, researchers studying chimpanzees (*Pan troglodytes verus*) at Taï, Ivory Coast, worked alone, and did not cut transects or trails but learnt to orient themselves in the forest with a compass. We took the same approach with lowland gorillas (*Gorilla gorilla gorilla*) at Lopé, Gabon, where an additional factor was fast-growing vines in the family Marantaceae that would have required labour-intensive trail maintenance. Learning the layout of the forest, using features such as streams and vegetation types, without trail cutting keeps disturbance to a minimum. In African forests with high elephant density, you can also use established networks of elephant trails.

Some researchers studying monkeys with home ranges smaller than those of great apes have found a trail system to be invaluable. Kaplin judged a trail system crucial to keeping up with blue monkeys (*Cercopithecus mitis*) and therefore to habituating them, and that 'building it as we went was key. It was created to facilitate animal follows, and improved as we came to know the animals and began to predict where we could find them. The trail system allowed us to move more quickly through the forest, and to open access to places where the monkeys had travelled previously' (B. Kaplin, personal communication, 2002). Other researchers have established trails on a grid system (e.g. Bezamahafaly, Madagascar) or worked in previously logged areas where an old trail or grid system existed (e.g. Kirindy, Madagascar) or at sites where oil or mineral prospection has left transects (e.g. Menabe, Madagascar).

Finding your primate

Frequent contacts with the same individuals are necessary to achieve habituation, so locating a known group or individual daily is important. Some researchers have trapped and radio-tagged primates as an aid to locating them (Chapters 7 and 10, this volume). This option must be carefully considered for several reasons, including ethics. In

addition, depending on the species and procedures used, catching and marking may actually set back habituation (Sterling, 1993). Assuming that you don't use catching and marking, you need to locate primates by other means. Searching at random in the hope of encountering your primate is unlikely to be a successful strategy, especially when animals are in small and cryptic groups or occur at low densities (for example, lowland gorillas usually occur at about one group per 10 km^2). Prior knowledge about the behavioural ecology of your species is extremely helpful, but when this is not possible, some practical decisions and a number of clues may help in locating primates and ensuring regular contact.

Auditory clues

Often the first indication of primate presence will be vocalizations such as long-calls (e.g. chimpanzees, *Pan troglodytes*; gibbons, *Hylobates* spp.; howler monkeys, *Alouatta* spp.; indri, *Indri indri*), alarm calls or warning barks. Taking a compass bearing and heading in that direction should facilitate your approach. Alternatively, sounds of movement in the vegetation as animals travel may alert you to their presence. Groups of arboreal guenons and colobines can be quite noisy as branches and leaves move with their passage; species such as *Colobus* and *Propithecus* make a thump as they land on larger branches and trunks; or you may hear sounds of food processing (including nut cracking) or plant parts dropping to the ground. You can locate chimpanzees from their drumming. Indirect evidence of primate presence includes nests (great apes), feeding signs, dung and scent- or gouge-marks.

Waiting at key sites

An alternative to searching for your primates is to wait for them to come to you by identifying key sites where it may be possible to encounter them regularly. Being at an animal's sleeping site before it wakes means that you can locate your animal early in the day and become part of the surroundings it sees on waking up. Most primates sleep above ground, so aim to be close to nests, sleeping cliffs, sleeping trees or tree holes before dawn (before dusk for nocturnal primates). Predictable food resources, such as figs, salt licks, water sources and seasonally available foods with limited distribution, are also good places to locate primates.

It is possible to establish key sites through provisioning, which is the use of artificial feeding as a positive incentive to tolerate human presence. If you provide food at limited sites, animals will be attracted to those sites and may be easier to observe and habituate than trying to locate them in the forest. However, provisioning has several disadvantages (Chapter 11), including the modification of natural behaviour. For example, changes in chimpanzee activity budgets, aggression and territoriality were recorded at Gombe and Mahale, Tanzania (Wrangham, 1974). Provisioning can also affect non-target species: baboons (*Papio cynocephalus*) have been habituated as a side-effect of provisioning chimpanzees (A. Collins, personal communication, 2002).

Approaching your animals

How contact is established is one of the most important elements of successful habituation, and various factors should be taken into account. Above all, avoid surprise; sudden contacts that frighten the animals will always have a negative impact. Be seen as often as possible and always in a calm, relaxed posture. Initially, it is desirable to be clearly visible at a distance greater than that which invokes alarm and flight. Obviously the practicalities will depend on habitat variables (discussed below).

Habituation can only be achieved when the primate sees you, but try to choose the moment. Once you make your presence known, the animals are likely to leave; you will need to sacrifice observation to achieve progress. Many primates can identify human faces, so the same observers should contact the animals, at least during the initial stages of habituation. It is also helpful to be consistent in your appearance (wear the same clothing, hat, rucksack, etc.). Behave calmly and attempt to 'reassure' animals by remaining still and/or mimicking natural behaviours, such as grooming or feeding. A crouching or sitting position was less intimidating to bonobos (*Pan paniscus*) than a walking observer (Krunkelsven *et al.*, 1999).

Signalling your presence

It is often useful to adopt a signal that communicates your presence and which the primates learn to associate with your approach. This signal should be a specific noise, which becomes identified with a non-threatening presence. 'Belch' or 'tongue-clacking' vocalizations are used with gorillas.

Keeping your distance

It is difficult to make generalizations, but err on the side of caution, while trying to maintain good visibility between primate and observer. Appropriate distances will depend on the environment, especially vegetation density, visibility, species concerned and risks of disease transmission. For example, the regulation minimum distance for observing mountain gorillas is 7 m (Homsy, 1999).

What not to do

Avoid making loud noises, sudden gestures, or surreptitious movements, although tolerance will depend on species and habitat. Primates do not like to be crept up on or followed, so avoid hiding and help them to keep track of your location by vocalizing. Many species respond better to arriving upon an observer. Moreover, 'pushing' primates ahead of you by following them may cause them to incur unnecessary energetic costs. Avoid pointing with telephoto lenses, sticks or guns.

Primates are also sensitive to the number of people present, so it is better to habituate with only one or two observers, preferably the same people. Even habituated primates may alter their behaviour with more observers: stumptail macaques (*Macaca arctoides*) reacted differently to a team of observers than to the presence of one or two (Rasmussen, 1991), Sulawesi crested black macaques (*Macaca nigra*) were more likely to flee or climb trees when visited by larger groups of people (Kinnaird & O'Brien, 1996) and mongoose lemurs (*Eulemur mongoz*) exhibited signs of agitation if unknown observers were present or more than one or two people followed them (D. Curtis, personal communication, 2002).

Recording data

Systematic records are vital for assessing progress towards habituation, so we recommend recording the following: (1) time at which search started, (2) time animals were located, (3) how animals were located, (4) observer–primate distance (often useful to measure perpendicular distance and height e.g., guenons at 40 m and at 15–20 m height), (5) animals' activity when contacted, (6) animals' behaviour in response to observer, (7) time at end of contact, and (8) how contact ended. As a minimum, collect cumulative contact time (after your presence has been detected), observation time and location of subjects.

Table 2.1 *Typical reactions of primates to observer presence during the habituation process*

Behaviour	Definition
Flight	Rapid, often noisy, panicked departure coupled with alarm or fear vocalizations, but no display
Avoidance	Groups are relatively calm, silent, and disappear quickly without displaying; they 'melt' into the forest
Curiosity	Responses range from brief monitoring (surveillance), to moving to acquire a clearer view of an observer, to approaching the observer
Display	Vocalizations and species-typical displays (e.g., chest-beats, branch bouncing, yawns) are directed at the observer
Ignore	Animal is aware of the observer's presence but shows no obvious response

Habituation can only occur when the same individuals are contacted on a regular basis, so it will be important to know whether you are seeing the same individuals. In addition to sex and age class, try to record shape of face, ears and nose pattern, pelage pattern and any scars, notches in ears, missing fingers or toes, broken canines, bent/broken tails.

Changes in behaviour during habituation provide valuable information for quantifying the process and measuring the changing impact of observer presence. Choose simple categories of behaviour that can be easily quantified (Table 2.1).

Knowing when your primate is habituated

Ideally your subjects will be aware of your presence yet learn to ignore you. During habituation, both primate and observer behaviour is likely to change. As your familiarity with the species and its habitat increases, your ability to move around the study area, pick up clues to primate location, and identify individuals should improve, reducing search time. Moreover, as the primates become habituated to your presence, there should be an increase in the duration of average contact time, and decreases in flight, avoidance and display behaviours. Be aware that daily path length or nightly travel distance may increase during initial stages of habituation as animals flee, but travel decreases as habituation progresses (Geoffroy's tamarins *Saguinus geoffroyi*,

Rasmussen, 1998; lowland gorillas, Cipolletta, 2003; spectral tarsiers *Tarsius spectrum*, S. Gursky-Doyen, personal communication, 2009). The ratio of habituation time to observation time should change, but be patient and do not have high expectations: mean contact time with lowland gorillas increased from about 7 min to only 20 min over three years (Blom *et al.*, 2004). 'Hand-over' periods may be helpful if different people will be involved in habituation, although these should be avoided during the early phases. Rasmussen (1991) reported that observers who were at ease and not intimidated by stumptail macaques evoked a different response than neophyte observers. It's worth sounding a note of caution here: can we ever assume that a study animal behaves as it would if no observer was present? Rasmussen (1991) also found that stumptail macaques adjusted their travel in the presence of observers even after 14 years of almost daily contact, while Jack *et al.* (2008) pointed out that white-faced capuchin monkeys (*Cebus capucinus*) still reacted to observers after 20 years of research and suggested that 'we can never become a truly neutral presence to our study animals' (p. 494).

Habituation is an ongoing process, especially as group composition changes with immigration, emigration, births and deaths. The time taken to habituate depends on a range of factors, which may be taxon-specific, influenced by the environment, or linked to previous experience of humans. A rough guide to habituation time is presented in Table 2.2. Most nocturnal primates (bushbabies, *Galago* spp.; sportive lemurs, *Lepilemur* spp.; woolly lemurs, *Avahi* spp.; and dwarf lemurs, *Cheirogaleus* spp.; but not aye-ayes or tarsiers) appear to need no habituating at all, they simply continue their activity after noticing an observer. Diurnal and cathemeral lemurs that have not been hunted and are accustomed to humans passing through the forest can be habituated in less than a month (Andrews & Birkinshaw, 1998; Curtis, 1998). It took about three months to be able to follow arboreal mangabeys (*Cercocebus albigena*) without disturbing them or causing them to flee, but six months before there was no noticeable effect of observer presence on their behaviour (R. Kormos, personal communication, 2002). Similarly, it took three months before a group of patas monkeys (*Erythrocebus patas*) could be followed all day, and six months before they could be reliably observed from 50 m (Chism & Rowell, 1988). Hamadryas baboons (*Papio hamadryas*) could be approached to 60 m within a year, but to be able to walk among them took about two years (Kummer, 1995). Only after a year of repeated contacts did lowland gorillas' reactions change from

Table 2.2 *Approximate times to habituate non-provisioned primates that have not been hunted*

Time	Primate taxa	Source
< 1 hour –	Bushbabies (*Galago* spp.)	S. Bearder, pers. comm., 2002
< 1 week	Most nocturnal lemurs	A. Mueller, pers. comm., 2002; U. Thalmann, pers. comm., 2002
~1 month	Most diurnal and cathemeral lemurs	A. Feistner, pers. obs.
	Orangutan *(Pongo pygmaeus)*	Rodman, 1979
	Spectral tarsiers *(Tarsius spectrum*)	S. Gursky-Doyen, pers. comm., 2009
2–5 months	Aye aye *(Daubentonia madagascariensis)*	Sterling, 1993
	Potto (*Perodicticus potto)*	E. Pimley, pers. comm., 2002
	Marmosets (*Callithrix* spp.) and tamarins (*Saguinus* spp.)	Passamani, 1998; Rasmussen, 1998; Rylands, 1986
	Chacma and olive baboons (*Papio ursinus, P. anubis*)	Barton & Whiten, 1993; Cowlishaw, 1997; Y. Warren, pers. comm., 2002
3–8 months	Colobus (*Colobus satanus*)	M. Harrison, pers. comm., 2002
	Guenons (*Cercopithecus l'hoesti, C. mitis*)	B. Kaplin, pers. comm., 2002
	Mangabey (*Cercocebus albigena*)	R. Kormos, pers. comm., 2002
	Muriqui (*Brachyteles arachnoides*)	Strier, 1999
6+ months	Patas (*Erythrocebus patas*)	Chism & Rowell, 1988
	Siamang (*Hylobates syndactylus*)	Chivers, 1974
	Yellow baboon (*Papio cynocephalus*)	Rasmussen, 1979
1–2 years	Hamadryas baboon (*Papio hamadryas*)	Kummer, 1995
	Mountain gorilla (*Gorilla beringei*)	Butynski, 2001; Schaller, 1963
2–5 years	Bonobo (*Pan paniscus*)	Susman, 1984
5–15 years	Chimpanzee (*Pan troglodytes*)	Bertolani & Boesch, 2008
	Lowland gorilla (*Gorilla gorilla*)	Blom *et al.*, 2004; Doran-Sheehy *et al.*, 2007

aggression to ignore (Blom *et al.*, 2004), yet titi monkeys (*Callicebus personatus personatus*) were habituated without systematic effort in about 12 weeks (E. Price, personal communication, 2002).

FACTORS AFFECTING PRIMATE HABITUATION

Many factors influence the success of habituation: some can be determined by the observer, such as contact distance and observer behaviour, while there are others which you cannot control, such as species-specific reactions, habitat variables and previous experience with humans. Many of these factors interact; here we attempt to evaluate some of them.

Species-specific factors

Species differences

In general, opportunistic species, such as macaques (*Macaca* spp.) and baboons (*Papio* spp.), are relatively easy to habituate because they are extrovert and adapt readily to changing circumstances. Moreover, if one macaque or baboon approaches with no negative consequences, others may learn from watching that 'non' interaction. Primates that live in stable groups also tend to be easy because when you encounter one individual you have usually found the whole group. In contrast, chimpanzees travel in small groups and their fission–fusion society means that if you follow two or three one day you may encounter a different subgroup next day.

Diet is an important factor. Arboreal folivores such as colobus tend to be easier to habituate than arboreal frugivores such as guenons. This is likely to be related to the former having smaller home ranges, and their food being available in larger patches so that more individuals can feed together and increased time is spent resting.

Home-range size is also important: primates with large home ranges are more difficult to encounter consistently, partly explaining differences between mountain and lowland gorillas, and perhaps the difficulty of habituating mandrills (*Mandrillus sphinx*) and drills (*M. leucophaeus*).

Even when sympatric, species vary in their ease of habituation. For example, white-throated capuchins (*Cebus capuchinus*) have habituated to people, whereas squirrel monkeys (*Saimiri oerstedi*) in the same area of Costa Rica have not (Boinski & Sirot, 1997). In addition,

monkeys that sometimes occur in polyspecific groups may react differently depending on the circumstances: habituated mangabeys fled without looking when unhabituated guenons alarm called; but were much bolder in polyspecific groups (R. Kormos, personal communication, 2002).

Finally, evolutionary history can influence ease of habituation. It may be that Madagascan strepsirhines are remarkably easy to habituate as a result of the reduced predator assemblage in Madagascar, combined with the very recent arrival of humans, some 2000 years ago.

Sex and age differences

Responses also differ according to primate age and sex. In multi-male multi-female or one-male multi-female groups, adult males tend to be larger, more aggressive, and play patrolling or sentinel roles in groups. Thus they are more overt and often more exposed to observer contact than females carrying or protecting young, while juveniles generally respond with more curiosity than adults. Bertolani and Boesch (2008) found that male chimpanzees habituate faster than females, and cycling females faster than non-cycling females; however, there were strong individual differences with some females not fully habituated after 15 years.

Habitat factors: visibility

A clear view of the observer is one of the most important factors in habituation. Primates living in more open habitats (such as baboons) are easier to habituate than those living in dense forest (such as mandrills), both within and between taxa. In open habitats, such as savanna, you can gradually move closer as animals see you from a distance. However, some open habitats still have poor visibility; patas monkeys, for example, are notoriously difficult to habituate (Chism & Rowell, 1988).

In the Virunga Volcanoes, low vegetation and uneven topography provide ideal conditions to observe mountain gorillas (*Gorilla beringei beringei*) from the opposite side of a ravine. In contrast, visibility in lowland forest is poor, and lowland gorillas are usually obscured even within 10 m of an observer, unless they climb trees. Sudden contacts are difficult to avoid in dense forest, and probably hinder habituation by frightening the animals.

Issues of visibility may explain differences between terrestrial and arboreal forest primates. Arboreal guenons are generally easier to habituate than terrestrial ones. Terrestrial sun-tailed guenons (*Cercopithecus solatus*) seem almost impossible to habituate owing to their large home ranges and cryptic habits. L'Hoest's guenons (*Cercopithecus l'hoesti*) are wary when followed on the ground, in contrast to blue monkeys, which seem less concerned by observer presence when high in the trees (B. Kaplin, personal communication, 2002). The semi-terrestrial pigtail macaques (*Macaca nemestrina*) are more difficult to habituate than arboreal long-tailed macaques (*Macaca fascicularis*).

ETHICAL ISSUES

Risks to humans

During habituation, aggression initially increases, peaks and then diminishes (Blom *et al.*, 2004); thus, in the early stages, habituators may be subject to intimidating displays. These are more likely to be unpleasant than dangerous; however, people have been bitten while habituating gorillas.

Over-habituation also poses risks. A primary aim of habituation is for the observer to become a neutral element in the environment. However, primates are highly intelligent, complex, socially manipulative animals, and over-familiarity with the observer may change the observer from being a 'piece of the furniture' to a social tool, available for inclusion in their social relations. Being 'used' by your study animals is rarely mentioned in the literature, although it probably happens regularly. Mountain gorillas sometimes redirect aggression towards a more vulnerable observer rather than a conspecific, and baboons and macaques use observers in displays or to avoid aggression from others. Very habituated lemurs also occasionally redirect aggression at observers (J. Razafimahaimodison, personal communication, 2009). Even seemingly harmless interactions such as a juvenile approaching an observer can quickly lead to incite-screaming, leaving the observer in trouble.

Finally, loss of fear of humans can lead to negative interactions with local people: baboons and chimpanzees attack and steal from villagers; habituated mountain gorillas feed in fields outside the national park and have attacked people in fields. Over-habituation and/or poorly managed contacts pose severe problems for local

human populations, ecotourism programmes and primate conservation, to the extent that Human–Wildlife Conflict has become a science (see, for example, Hockings & Humle, 2009).

Risks to primates

You should seriously evaluate whether or not to attempt habituation in terms of the long-term effects on normal activity, behaviour and vulnerability.

Disease transmission between humans and non-human primates

Close proximity with researchers increases the risks of disease transmission (Chapters 1 and 8), particularly for terrestrial primates. Certain human pathogens, both respiratory (measles, herpes, pneumonia) and enteric (polio, salmonella), can infect apes; deaths have occurred in wild populations (Butynski, 2001). Studies of captive apes show that they have a definite susceptibility to human diseases, but not the same resistance as humans, and illnesses to which animals have never been exposed are potentially the most dangerous (Homsy, 1999). Commonsense observer behaviours can reduce the risks: avoiding physical contact, careful management of waste products, avoiding excretion in the forest and not working if feeling unwell. Quarantine periods for field staff and minimum distance regulations should be in place for all habituated primates.

Stress

Stress provoked during habituation could potentially reduce reproductive success or result in immunosuppression and increased susceptibility to disease (Woodford *et al*., 2002). Jack *et al*. (2008) documented decreasing cortisol levels in capuchin monkeys during habituation, and measuring cortisol non-invasively from faecal samples could be useful for monitoring habituation over time (Nizeyi, 2005).

Generalization to other humans

Since habituation is basically the loss of fear of humans, we make animals more easily approachable by hunters and poachers and render them extremely vulnerable in dangerous situations, as evidenced by the deliberate killing of mountain gorillas in the Democratic Republic

of Congo (BBC, 2007). Thus, you should seriously consider the future of your study population, and your ability to sustain protection, before undertaking habituation.

Other impacts on primate behaviour

The presence of an observer can have direct or indirect effects on primate behaviour by changing the target species' interactions with its conspecifics, predators, prey and other species in its environment. Activity budgets may change, as feeding and other activities are disrupted while the animals move away from habituators, and groups fleeing to avoid human contact will expend more energy. For example, 'chimpanzees sit down and wait for us to catch up if we're slow or disappear into deep thickets to lose us' (J. Setchell, personal communication, 2001). Regular contact with humans may also hinder reproduction, alter inter-group dynamics and impede transfer between groups. Habituated and unhabituated primates respond differently to people, so a human presence may well alter the nature of interactions between neighbouring groups, unintentionally benefiting a study group. For example, a naïve group may flee, enabling the habituated group to take over a food resource (see, for example, Rasmussen, 1991). Finally, carnivores (hyenas, *Hyaena hyaena*; lions, *Panthera leo*; leopards, *Panthera pardus*; ocelots, *Leopardas pardalis*; and fossa, *Cryptoprocta ferox*) are unlikely to approach when a human is present, so habituated groups may inadvertently be protected from predation (see, for example, Isbell & Young, 1993; Rasmussen, 1979).

CONCLUSIONS

In this chapter we have explored factors affecting the habituation of primates to human observers. The key to success is persistent, regular and frequent neutral contact with the same individuals. Habituation usually requires considerable time investment, from months to years, depending on species and environment (with Madagascan strepsirhines the exception). In addition, habituated animals are more vulnerable to human predators, so when we habituate primates, we must accept responsibility for their protection for the remainder of their lives (Goldsmith, 2005). We suggest that anyone intending to habituate primates should (1) think carefully about the pros and cons, especially the potential risks and need for long-term commitment, (2) familiarize themselves with their study species prior to going to the field,

(3) engage and use their common sense, and (4) record, measure and evaluate the habituation process. Habituation is usually hard work but the rewards, both personal and academic, are great: being in the company of wild primates that have accepted you into their environment and allow you an insight into their daily lives is a privilege.

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