Global Federation of Animal Sanctuaries

Standards For Prosimian Sanctuaries

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INTRODUCTION

GFAS PRINCIPLES

The Global Federation of Animal Sanctuaries (GFAS) will designate an organization as "verified" or "accredited" based upon its substantial compliance with the standards listed below. GFAS recognizes that some organizations under consideration will operate valid rescue and rehabilitation programs with a goal of releasing wildlife to the wild pursuant to IUCN and/or other international or national standards. For those animals, lifetime sanctuary care may not be part of the organization's mission. While the care for these animals may be provided on an interim basis only, the organization is still expected to meet the standards below with regard to all animals in its care and for purposes of these standards it will be identified as a "sanctuary."

Consistent with GFAS' philosophy and the standards below, it is expected that a sanctuary does not adopt policy positions that are in opposition to the welfare of the species of animals in the care of the sanctuary (for example, while it is not required that a primate sanctuary affirmatively promote a policy against laboratory research using primates, it should not promote a policy in favor of such research).

Note: Several standards make reference to a sanctuary's "Director." GFAS recognizes that a sanctuary may use a different title, and the term "Director" is intended to reference the sanctuary's Sanctuary Director, who may be called an Executive Director or Chief Executive Officer, etc.

GFAS also recognizes that sanctuaries may rely on volunteers for certain functions, including some aspects of animal care (such as food preparation). Standards referencing "staff" may take into account appropriately qualified and trained volunteers as well as employees.

ANIMALS COVERED BY THESE STANDARDS

1. Family / Genus

a. Family: Cheirogaleidae, Daubentoniidae, Galagidae, Indriidae, Lemuridae, Lepilemuridae, Lorisidae,
b. Genus: Allocebus, Avahi, Cheirogaleus, Daubentonia, Eulemur, Euoticus, Galago, Galagoides, Hapalemur, Indri, Lemur, Lepilemur, Loris, Microcebus, Mirza, Nycticebus, Otolemur, Perodicticus, Phaner, Prolemur, Propithecus, Sciurocheirus, Varecia

Genus	species	Common name
Allocebus	*trichotis*	Hairy-eared dwarf lemur
Arctocebus	*aureus*	Golden angwantibo, Golden potto
Arctocebus	*calabarensis*	Calabar angwantibo, Angwantibo, Golden potto
Avahi	*betsileo*	Betsieo woolly lemur
Avahi	*cleesei*	Bemaraha woolly lemur
Avahi	*laniger*	Gmelin's woolly lemur, Eastern avahi, Eastern woolly lemur, Woolly indris, Woolly lemur
Avahi	*meridionalis*	Southern woolly lemur
Avahi	*occidentalis*	Lorenz Von Liburnau's woolly lemur, Western avahi, Western woolly lemur
Avahi	*peyrierasi*	Peyrieras' woolly lemur
Avahi	*ramanantsoavanai*	Ramanantsoavana's southern woolly lemur
Avahi	*unicolor*	Sambirano woolly lemur, Sambirano avahi
Cheirogaleus	*adipicaudatus*	Southern fat-tailed dwarf lemur, Spiny desert dwarf lemur, crSpiny forest dwarf lemur
Cheirogaleus	*crossleyi*	Furry-eared dwarf lemur, Crossley's dwarf lemur
Cheirogaleus	*major*	Geoffroy's dwarf lemur, Greater dwarf lemur
Cheirogaleus	*medius*	Western fat-tailed dwarf lemur, Fat-tailed dwarf lemur, Lesser dwarf lemur
Cheirogaleus	*minusculus*	Lesser iron-grey dwarf lemur
Cheirogaleus	*ravus*	Greater iron-grey dwarf lemur, Large iron-grey dwarf lemur
Cheirogaleus	*sibreei*	Sibree's dwarf lemur
Daubentonia	*madagascariensis*	Aye-aye
Eulemur	*albifrons*	White-fronted lemur, White-fronted brown lemur
Eulemur	*cinereiceps*	White-collared lemur, White-collared brown lemur
Eulemur	*collaris*	Collared brown lemur, Red-collared lemur
Eulemur	*coronatus*	Crowned lemur
Eulemur	*fulvus*	Brown lemur, Common brown lemur
Eulemur	*macaco*	Black lemur
Eulemur	*mongoz*	Mongoose lemur
Eulemur	*rubiventer*	Red-bellied lemur
Eulemur	*rufifrons*	Red-fronted brown lemur, Bennett's brown lemur
Eulemur	*rufus*	Red brown lemur, Audebert's Brown lemur, Red-fronted brown lemur,
Eulemur	*sanfordi*	Sanford's brown lemur
Euoticus	*elegantus*	Southern needle-clawed galago, Elegant galago, Elegant needle-clawed galago, Needle-clawed bushbaby, Western needle-clawed galago
Euoticus	*pallidus*	Northern needle-clawed galago, Northern needle-clawed bushbaby, Pallid needle-clawed galago
Galago	*gallarum*	Somali lesser galago, Somali galago
Galago	*matschiei*	Spectacled lesser galago, Eastern needle-clawed bushbaby, Eastern needle-clawed galago, Lesser needle-clawed galago, Matschie's galago, Spectacled galago

Galago	*Moholi*	Southern lesser galago, Moholo galago, South African galago, South African lesser galago
Galago	*Senegalensis*	Northern lesser galago, Lesser bushbaby, Lesser galago, Senegal galago, Senegal lesser galago
Galago	*Cocos*	Kenya coast galago
Galago	*Demidovii*	Demidoff's dwarf galago, Demidoff's galago, Dwarf bushbaby, Dwarf galago
Galagoides	*Granti*	Grant's lesser galago, Grant's dwarf galago,Mozambique lesser galago
Galagoides	*Nyasae*	Malawi galago
Galagoides	*Orinus*	Mountain dwarf galago, Amani dwarf galago, Uluguru bushbaby
Galagoides	*Rondoensis*	Rondo dwarf galago, Rondo bushbaby
Galagoides	*Thomasi*	Thomas's dwarf galago, Thomas's bushbaby
Galagoides	*Zanzibaricus*	Zanzibar/udzungwa galago, Matundu dwarf galago, Udzungwa bushbaby, Zanzibar bushbaby, Zanzibar galago
Hapalemur	*Alaotrensis*	Alaotran gentle lemur, Alaotra reed lemur, Lac Alaotra bamboo lemur, Lake Alaotra gentle lemur
Hapalemur	*Aureus*	Golden bamboo lemur, Golden lemur
Hapalemur	*Griseus*	Eastern lesser bamboo lemur, Bamboo lemur, Grey gentle lemur, Lesser bamboo lemur
Hapalemur	*Meridionalis*	Rusty-gray lesser bamboo lemur, Southern grey bamboo lemur, Southern lesser bamboo lemur
Hapalemur	*Occidentalis*	Sambirano lesser bamboo lemur, Western gentle lemur, Western grey bamboo lemur, Western lesser bamboo lemur
Indri	*Indri*	Indri
Lemur	*Catta*	Ring-tailed lemur
Lepilemur	*Aeeclis*	Antafia sportive lemur
Lepilemur	*Ahmansonorum*	Ahmanson's sportive lemur
Lepilemur	*Ankaranensis*	Ankarana sportive lemur
Lepilemur	*Betsileo*	Betsileo sportive lemur
Lepilemur	*Dorsalis*	Gray's sportive lemur, Grey-backed sportive lemur, Nossi-be sportive lemur
Lepilemur	*Edwardsi*	Milne-Edwards's sportive lemur
Lepilemur	*Fleuretae*	Fleurete's sportive lemur
Lepilemur	*Grewcockorum*	Grewcock's sportive lemur
Lepilemur	*Hubbardorum*	Hubbard's sportive lemur
Lepilemur	*Jamesorum*	James' sportive lemur
Lepilemur	*Leucopus*	White-footed sportive lemur, Dry-bush weasel lemur
Lepilemur	*Microdon*	Small-toothed sportive lemur, Light-necked sportive lemur, Microdon sportive lemur
Lepilemur	*Milanoli*	Daraina sportive lemur
Lepilemur	*Mittermeieri*	Mittermeier's sportive lemur
Lepilemur	*Mustelinus*	Weasel sportive lemur, Greater sportive lemur, Greater weasel lemur,
Lepilemur	*otto*	Otto's sportive lemur

Lepilemur	*petteri*	Petter's sportive lemur
Lepilemur	*randrianasoloi*	Randrianasolo's sportive lemur
Lepilemur	*ruficaudatus*	Red-tailed sportive lemur, Lesser weasel lemur
Lepilemur	*sahamalezensis*	Sahamalaza Peninsula sportive lemur, Sahamalaza sportive lemur,
Lepilemur	*seali*	Seal's sportive lemur
Lepilemur	*septentrionalis*	Sahafary sportive lemur, Northern sportive lemur
Lepilemur	*tymerlachsonorum*	Nosy Be sportive lemur, Hawks' sportive lemur
Lepilemur	*wrightae*	Wright's sportive lemur
Loris	*lydekkerianus*	Grey slender loris, Highland slender loris
Loris	*tardgradus*	Red slender loris, Slender loris
MIcrocebus	*berthae*	Madame Berthe's mouse lemur, Berthe's mouse lemur,
Microcebus	*bongolavensis*	Bongolava mouse lemur
Microcebus	*danfossorum*	Danfoss' mouse lemur
Microcebus	*griseorufus*	Grey-brown mouse lemur
Microcebus	*jollyae*	Jolly's mouse lemur
Microcebus	*lehilahytsara*	Goodman's mouse lemur
Microcebus	*mamiratra*	Claire's mouse lemur
Microcebus	*mittermeieri*	Mittermeier's mouse lemur
Microcebus	murinus	Grey mouse lemur, Lesser mouse lemur
Microcebus	*myoxinus*	Peter's mouse lemur, Pygmy mouse lemur, Western rufous mouse lemur
Microcebus	*ravelobensis*	Golden-brown mouse lemur
Microcebus	*rufus*	Rufous mouse lemur, Brown mouse lemur, Russett mouse lemur
Microcebus	*sambiranensis*	Sambirano mouse lemur
Microcebus	*simmonsi*	Simmons' mouse lemur
Microcebus	*tavaratra*	Tavaratra mouse lemur, Northern rufous mouse lemur
Mirza	*coquereli*	Coquerel's giant mouse lemur, Coquerel's dwarf lemur, Coquerel's mouse lemur
Mirza	*zaza*	Northern giant mouse lemur
Nycticebus	*bengalensis*	Bengal slow loris, Bengal loris, Northern slow loris
Nycticebus	*coucang*	Greater slow loris, Slow loris, Sunda slow loris
Nycticebus	*javanicus*	Javan slow loris
Nycticebus	*menagensis*	Bornean slow loris
Nycticebus	*pygmaeus*	Pygmy slow loris, Lesser slow loris, Pygmy loris
Otolemur	*crassicaudatus*	Thick-tailed greater galago, Garnett's greater galago, Greater bushbaby, Greater galago, Large-eared galago, Thick-tailed bushbaby
Otolemur	*garnetti*	Small-eared greater galago, Garnett's greater galago, Small-eared galago
Perodicticus	*Potto*	Potto, potto gibbon
Phaner	*electromontis*	Montagne D' Ambre fork-marked lemur, Amber Mountain fork-marked lemur

Phaner	*Furcifer*	Masoala fork-marked lemur, Eastern fork-marked lemur
Phaner	*Pallescens*	Pale fork-marked lemur, Western fork-marked lemur
Phaner	*Parienti*	Sambirano fork-marked lemur, Pariente's fork-marked lemur
Prolemur	*Simus*	Greater bamboo lemur, Broad-nosed gentle lemur
Propithecus	*Candidus*	Silky sifaka, Silky simpona
Propithecus	*Coquereli*	Coquerel's sifaka, Crowned sifaka
Propithecus	*Coronatus*	Crowned sifaka
Propithecus	*Deckenii*	Van Der Decken's sifaka, Decken's sifaka
Propithecus	*Diadema*	Diademed sifaka
Propithecus	*Edwardsi*	Milne-edward's sifaka, Milne-edward's simpona
Propithecus	*Perrieri*	Perrier's sifaka
Propithecus	*Tattersali*	Golden-crowned sifaka, Tattersall's sifaka
Propithecus	*Verreauxi*	Verreaux's sifaka
Sciurocheirus	*Alleni*	Allen's galago, Allen's bushbaby, Allen's squirrel galago
Sciurocheirus	*Gabonensis*	Gabon Allen's galago
Tarsius	*Bancanus*	Horsfield's tarsier, Western tarsier
Tarsius	*Dentatus*	Dian's tarsier, Diana tarsier
Tarsius	*Lariang*	Lariang tarsier
Tarsius	*Pelengensis*	Peleng tarsier, Peleng Island tarsier
Tarsius	*Pumilus*	Pygmy tarsier, Lesser spectral tarsier, Mountain tarsier, Sulawesi Mountain tarsier,
Tarsius	*Sangirensis*	Sangihe tarsier, Sangihe Island tarsier
Tarsius	*Syrichta*	Philippine tarsier
Tarsius	*Tarsier*	Spectral tarsier, Eastern tarsier, Sulawesi tarsier
Varecia	*Rubra*	Red ruffed lemur, Red-ruffed lemur
Varecia	*Variegate*	Black-and-white ruffed lemur, Rufffed lemur

Version Updates:

New and Updated content released on February 2015

- G-1 Nonprofit/ Non-Commercial Status, P-3 Disposition Ethics and Responsibility, P-4 Disposition of Live Prosimians, P-5 Euthanasia
-

New and Changed content released on July 2015

- V-7 Breeding/Contraception – section a.

Updated content released on July 2016

- H-1 Types of Space and Size
- S-6 General Staff Safety

PROSIMIAN STANDARDS

GFAS notes that there may be other acceptable ways of meeting the intent of each standard, aside from those detailed below, and that in some instances there may be legal, cultural or other significant barriers to meeting GFAS requirements. The standards are considered mandatory, but GFAS will consider specific exceptions to some of the listed requirements (e.g., exact enclosure size, manner of record keeping, legal requirements that impact a sanctuary's acquisition policy, etc.). GFAS encourages sanctuaries to offer feedback on the standards and to explain any reasons why it believes it cannot meet a particular standard, or why the standard is not applicable and/or appropriate to its situation. Sanctuaries are also welcome to indicate a timeline for meeting a standard if the standard is not yet met at the time of application for accreditation or for verification.

The exceeding of the standards is encouraged. In addition to meeting these standards, an organization is expected to comply with all applicable international, national, state/province, and local laws and regulations.

PROSIMIAN HOUSING

H-1 Types of Space and Size

Unless otherwise directed by a veterinarian, prosimians are provided sufficient opportunity and space to move about freely and rapidly, and to exercise choice in location so as to reduce stress and maintain good physical condition.

General

a. The habitat and living conditions are species appropriate and replicate, in as much as possible, the prosimians' wild habitat with a balance between hygiene and the species' physiological and psychological needs. This includes adequate space, both vertical and horizontal, and appropriate space, in terms of diversity and complexity.

b. The physical space provides varied opportunities for the prosimians to interact with the environment and key elements are changed often, resulting in a dynamic living space.

c. Facility design takes into account caregiver-prosimian safety and ease of maintaining a positive relationship.

d. A double entry system so that there are two barriers between the animals and escape at all times is recommended for all species and required for any animals posing a safety risk. The two barriers are never open at the same time.

e. Facilities include multiple sub-enclosures so that prosimians can be shifted to allow temporary segregation of individuals or subgroups and for secure staff access to enclosures for cleaning, maintenance, etc.

f. Prosimians are provided access to as many areas of the enclosures as possible, except during staff maintenance activities, unless security concerns dictate otherwise. All enclosures interconnect without creating 'dead ends' to allow for freedom of movement of subordinate individuals.

g. Whenever possible, separated prosimians have visual and tactile access to group members to facilitate reintroduction.

h. The habitat provides appropriate visual, olfactory, and acoustic barriers.

i. The habitat provides security from predators and unauthorized human access.

Open Space Settings

j. Open space settings have enough acreage per animal to accommodate natural individual and group activities. Particular attention is paid to vertical aspects of their environment, allowing for more natural behaviors.

k. Where open space settings are the primary enclosure, two other areas may also be provided:

- Indoor day/night rooms or other means of providing night housing and secure shelter during inclement and extreme weather. This space also provides alternate housing for sick or injured individuals while in close proximity to the social group.
- Shift yards for use while the primary enclosure is serviced and/or for animal management needs including introduction of new individuals to a group, or temporary separation for health or social reasons. Shift yards should include a small cage area accessible from indoor housing, and a minimum of one door to the primary enclosure

Controlled Access Settings

l. While not as extensive as an open space setting, in controlled access areas ideally three enclosures are also provided: outdoor enclosures as the primary living space; indoor day/night rooms; and a shift yard or lock out.

Indoor Housing

m. Indoor housing provides year-round protection from the elements. For sanctuaries located in northern climates (where freezing temperatures occur regularly during any part of the year), indoor space is large enough to allow for all forms of species-specific behavior (running, climbing, etc.).

Mixed Species Enclosures

n. Caution is used when housing prosimians with other species as prosimians may experience dietary problems in mixed species enclosures. When an additional species is housed with prosimians, the enclosure dimensions are adjusted accordingly. Additional space reflects that required for both species if housed separately.

- For new construction, separate transfer doors are included for each species to be housed.
- For existing facilities, efforts are made to retrofit the facility with a separate transfer door to indoor areas and outdoor enclosures from the shift yard.
- Prosimians are not housed with, or in close proximity to, New World primates.

Dimensions

o. Many factors influence the minimum space required for a group of prosimians, including, but not limited to: group size and composition, and enclosure complexity. The following are general minimum requirements. Facilities provide as much space as is possible and/or practical.

p. Sanctuaries meeting only the general minimum requirements for enclosure space employ additional environmental enrichment, focusing on physical and mental exercise rather than food, to compensate for reduced space and complexity.

q. Outdoor enclosures for prosimians - Enclosure shape may be variable to take in natural features in the landscape such as rock formations, hills and trees, and there should be a minimum vertical dimension of 20 ft. (6 m). Space includes a minimum of one (1) animal transfer door leading to the indoor enclosure. Enclosures are a minimum of:

- 6.6 ft. (2 m) x 6.6 ft. (2m) for 1-2 tarsiers, mouse or dwarf lemurs with a height of 9.8 ft. (3 m) for either roofed or open top enclosures.
- 23 ft. (7m) x 23ft (7 m) for 1-2 indris or sifakas with a height of 19.7 ft. (6 m) for either roofed or open top enclosures.
- 16.4 ft. (5 m) x 16.4 ft. (5 m) for 1-2 aye-aye or true lemur with a height of 16.4 ft. (5 m) for either roofed or open top enclosure.

r. Indoor day/night rooms for prosimians have a minimum of two 'rooms' or one indoor room and one shift yard per group of compatible prosimians. Room dimension is dependent on intended purpose and/or duration of confinement.

- One room with a minimum dimension of 100 sq. ft. (9.3 sq. m) per compatible pair, with an additional 30 sq. ft. (2.8 sq. m) per additional animal.
- A minimum vertical height of 8 ft. (2.43 m) is recommended, with furniture and/or catwalks that allow use of vertical space.
- Rooms interconnect without creating 'dead ends' to allow for freedom of movement for subordinate individuals.
- Rooms include a minimum of one transfer door to an outdoor enclosure.

s. Shift yards for prosimians are a minimum of 100 sq. ft. (9.3 sq. m) for dwarf and mouse lemurs and tarsiers, 200 sq. ft. (18.6 sq. m) for other prosimians. The minimum vertical dimension is 8 ft. (2.43 m).

- A minimum of two (2) doors to indoor enclosures are recommended to prevent dominant individuals from blocking access to shade, sun, food, other desired space, social partners or enrichment items.
- Shift yards are roofed or have a mesh top due to the small size of the enclosure and jump distance of the prosimians.

H-2 Containment

Prosimians are safely contained.

General

a. Other than when being transported or for medical reasons, prosimians are kept at all times in secure enclosures or other appropriate areas.

b. Enclosures are designed to allow for prosimians' normal defense reactions and appropriate 'flight' or escape distances.

c. All enclosures are designed, constructed and maintained to securely contain prosimians and to present no likelihood of harm to them.

d. Distance or barriers between prosimians and between enclosures and personnel is sufficient to minimize stress to the animals and reduce the risk of disease transmission.

e. Enclosures are designed to allow for proper, safe cleaning and drainage.

f. A regular program of sanctuary maintenance is in place.

g. Materials are appropriate for their particular application and are maintained in good repair.

Outdoor Enclosures

h. Perimeter containment of outdoor areas is constructed so as to prevent digging under the barrier by native wildlife, domestic species and the enclosure residents.

i. Fences and enclosures are inspected daily for signs of digging. Where fencing meets hard surfaces such as rock or concrete, the fencing is securely anchored in place.

Fencing

j. Barbed or razor wire are not used to contain prosimians.

k. High tensile electric fencing may be used in conjunction with standard fencing products but is discouraged for use as a primary barrier.

l. The supporting posts for fences are firmly fixed into the ground.

m. Fence material is sufficiently secured to supporting posts in such a way that the weight of the prosimians could not detach it from the support nor dislodge the supporting posts.

n. Gates and doors are at least as strong, and as effective, in containing the prosimians as the rest of the enclosure barriers. In particular, gates and doors are designed and maintained so as to prevent animals from lifting them from their hinges or unfastening the securing device.

o. For both open top and covered enclosures, there is a minimum height of:

- 9.8 ft. (3 m) for tarsiers, dwarf and mouse lemurs.
- 16.4 ft (5m) for aye-aye and true lemurs.
- 19.7 ft (6m) for indris and sifakas.

p. If housed in open enclosures, the upper portion of the containment fence is cantilevered and the top third of the fencing is smooth, non-climbable.

- Open top enclosures are adequately secured to allow the animals to have 24 hour access without supervision.

q. Where fencing is used to contain prosimians, it is constructed of chain link, welded wire or woven wire mesh, with a minimum dimension of:

- 2 in.x2in (50.8mmx50.8mm) for sifakas, indris and true lemurs;
- 1in.x1in (25.4mmx25.4mm for all other prosimians.

r. If chain link is used, it is carefully installed, secured and regularly checked for looseness or buckling.

s. Welded wire mesh is regularly checked for weld breaks and weakened welds.
   - Welded wire mesh is not used for aye-aye due to their destructive capabilities.

Solid Barriers

t. Solid barriers such as concrete block, poured concrete and artificial rock can be used as the sole method of containment or in conjunction with other types of barrier.

u. Walls are secured in appropriate footings to ensure wall stability.

v. Care is taken, especially with artificial rock, to ensure that contours in the rock do not provide escape routes from the enclosure.

w. Design of areas using solid walls allows for sufficient airflow throughout an enclosure.

Moats

x. Moats, if used, are of sufficient size and depth to adequately confine prosimians. An escape route is built in to allow prosimians who fall into the moat back into their enclosure.

y. Dry moats are surrounded by fences, walls, hedges or shrubbery to prevent people approaching too close to the edge.

z. Animal caregivers have easy access to moats.

aa. Moats are accessible by skid steer or similar small tractor to repair erosion or grade issues to meet other service or repair needs in the enclosure.

bb. Water moats, which may be appropriate for some species of lemur, have a perimeter barrier height that exceeds the reach of the largest animal housed when the animal is at the deepest part of the moat.
   - Moat width is greater than the standard jump distance for the species housed.

cc. Electric wire is not used as secondary containment at the perimeter barrier.

dd. Rescue equipment, appropriate for human and prosimian rescue, is readily available at the moat area should animal or human fall into the water.

ee. There is a management plan for moats in regions where freezing is a concern.

ff. The moat does not serve as the primary source of drinking water. Water quality is, however, monitored on a regular basis (*see also* Standard N-1, “Water”).

Indoor Enclosures and Shift Yards

gg. Where mesh is used, a maximum dimension of 2 in. x 2 in. (50.8 mm X 50.8 mm) is recommended for sifakas and indris; 1 in. x 1 in. (25.4 mm X 25.4 mm) is recommended for all other prosimians and anywhere mesh separates adjacent cages. Woven wire mesh is recommended.

hh. Walls between enclosures can be constructed of concrete block or poured concrete. When concrete block is used, the voids are filled with sand or soil to strengthen the walls and reduce potential harborage of unwanted species.

ii. Walls are of sufficient strength to anchor caging and furniture.

jj. Design of areas using solid walls allows for sufficient air flow throughout the enclosure.

kk. Solid concrete or concrete block walls are sealed to make them impervious to contaminants and pathogens.

H-3 Ground and Plantings

Ground cover indoors and out is healthy for prosimians. Plantings are appropriate and safe.

Vegetation

a. All outdoor enclosures for prosimians include living or fresh vegetation, which can provide visual barriers, shade and resting sites.

b. All plant materials in an enclosure are evaluated for potential toxicity to the species held before use, including leaves, buds, seeds, fruit, bark and flowers.

c. Enclosures may also be planted with grasses, shrubs etc. that the prosimians do not tend eat, provisioning the animals with preferred plant material as part of the daily diet.

d. Any vegetation capable of harming prosimians is kept out of reach.

Outdoor Enclosures

e. All outdoor enclosures have a natural substrate consistent with the site.

- The substrate can be amended with organic materials, including but not limited to soils, sand, leaf litter, bark mulch, grasses, straw, hay, and wood shavings.
- Substrate is provided in sufficient amount/depth to cushion falls from perches or climbing structures.
- The substrate drains well.

f. Prosimians are provided with appropriate three-dimensional environments to accommodate an array of locomotory and foraging behaviors, as well as appropriate sleeping and resting areas, including nesting and bedding materials.

g. Varied topography provides visual barriers, increased enclosure complexity and varied elevations, and can be achieved using naturally occurring topography at a selected construction site or through additions of soils, culverts, rocks, logs, etc.

h. Horizontal and vertical jump distance of the species housed is considered when developing enclosure topography.

i. Where natural topography of an enclosure is not varied, it is created through the addition of natural and placed elements.

j. Trees - Key shade trees within an outdoor enclosure are identified and protected from damage.

- Trees that may be used as an escape route are identified, pruned or removed; or means to prevent prosimians from accessing them have been identified.
- Health of trees close to fence lines is checked regularly and any removed if there is fear of it coming down on fence line.
- Trees, vines and shrubs are checked daily and trimmed as necessary to ensure that growth does not allow escape from open top enclosures.

- Access to very tall trees is limited by electric wires, barriers, etc.
- Prosimian species which travel along adjacent branches rather than leaping from tree to tree are provided with sufficiently dense vegetation to allow for natural locomotion.

Indoor Enclosures

k. All indoor enclosures have a concrete floor and, provided adequate septic service is present, are sloped to a drain.

l. Existing construction ensures that all floors are sealed. For new construction, the indoor area is designed to accommodate a deep litter substrate.

- Deep litter enclosures are designed to allow appropriate litter depth and drainage for proper functioning.
- Litter is properly spot-cleaned and maintained.

m. Bedding materials are provided in sufficient amount/depth to cushion falls from perches or climbing structures.

- Bedding material suitable for use includes, but is not limited to, bark mulch, leaf litter, wood wool, straw hay, shredded paper and wood shavings.
- Particular attention is paid to ensuring lorises are provided sufficient bedding to reduce the risk of injury from startle response drops.

n. All prosimians are observed regularly for signs of illness that may be related to ingestion of foreign objects, including wood shavings, bark mulch or other materials that may pose a hazard.

Shift Yards

o. All outdoor shift yards have a minimum of 50% of the surface area in natural substrate. The remaining 50% may be concrete as appropriate for drainage, sanitation and structural needs.

p. The substrate can be amended with organic materials including, but not limited to, soils, sand, leaf litter, bark mulch, grasses, straw and hay. The substrate drains well.

q. Bedding materials are provided in sufficient amount/depth to cushion falls from perches or climbing structures.

H-4 Transfer Doors

Prosimian enclosure transfer doors are appropriately designed to ensure both animal and human health and safety.

General

a. Animal transfer doors are a key element of facility design. Doors are designed to allow transport crates to safely attach to them.

- Transport crates should be able to be moved in and out of the enclosure through the transfer doors.

b. Transfer doors are designed to remain functional under all circumstances and are maintained in good working order and free from any encumbrances that may prevent opening and closing.

c. Doors are designed to allow caregiver view of enclosures while operating the doors.

d. Doors are located at ground level or adjacent to perches and are designed to allow for normal posture while travelling though doorway. A minimum dimension of 1 ft. x 1ft. (0.3 m x 0.3 m).

- Transfer doors for other species housed with prosimians are located a height appropriate for that species.

e. Doors are designed such that people are out of view when prosimians are being shifted. If not, no eye contact is made with the animals going through the doors.

- Door design ensures that doors can not slam shut to reduce the chance of prosimians developing fear reactions to transfer doors.

f. Doors and door hardware are properly maintained to ensure proper functioning.

Security

g. Transfer doors and their frames are constructed of materials similar in strength to those used in the primary enclosure.

h. Doors are lockable in both the open and closed positions.

i. For pneumatic or hydraulic doors, pneumatic or hydraulic pressure is sufficient for keeping doors in the open position. A mechanical lock is, however, in place to lock the door in the closed position.

j. Particular attention is given to preventing hay/shavings from affecting door mechanisms.

Animal Safety

k. Doors operated via remote control are visible from the control area.

l. Guillotine doors are not recommended due to risk of animal injury. If used, a backup system should be in place to prevent door from free falling due to mechanical failure or operator error.

m. Hydraulic systems use peanut or other food-grade oils to prevent risks to the prosimians in the event of leakage.

n. Hydraulic and pneumatic door systems include backup systems to allow for door usage in the event of equipment failure.

User Safety

o. If door handles or locking mechanisms are in close proximity to the enclosure, a solid barrier is present to protect the user.

H-5 Shelter

Prosimians have access to man-made shelter that provides each individual with protection from extreme weather (including, but not limited to, prevailing wind, snow, sleet, rain, sun, and temperature extremes).

a. Prosimians have space to seek refuge from sun, wind, inclement weather and enclosure mates.

b. Shelter does not create or result in 'dead ends' in which individuals can be trapped by other group members.

c. Shade and shelter are provided in multiple locations within enclosures to ensure that all prosimians have access to shade throughout the day.

d. Shade and shelter can be created through natural and artificial means including shade trees and shade fabric.

e. Shelter areas provide dry space during wet weather, as well as protection from wind.

H-6 Enclosure Furniture

Prosimians are provided with an appropriately complex and rich habitat to explore, to ensure the animals' physical, nutritional and stimulation needs are met.

General

a. Enclosures are equipped, in accordance with the needs of the species, with bedding material, branch work, nesting/hide boxes, appropriate substrate, vegetation and other enrichment materials designed to aid and encourage normal behavior patterns and minimize any abnormal behavior.

b. Appropriate complexity is provided through the use of various natural and artificial materials in the enclosure, using a combination of items including, but not limited to, those listed above.

c. The date that items are placed in an enclosure is noted, and items are removed when they become soiled, damaged or novelty has diminished.

d. Prosimians are provided access to the vertical space available within the enclosures.

Outdoor Enclosures

e. Visual barriers are used to avoid confrontation or aggression, and include climbing structures, fallen logs, walls, shade structures, topography and large enrichment items.

- Particular attention is paid to appropriate visual barriers for lorises and similar species that naturally forage independently but cross through other conspecifics' range.

f. Climbing structures accommodate natural locomotion patterns for the species housed. When multiple species are housed together, climbing structures created specifically for each species' unique needs are provided. Metal pipe is not used to construct climbers as

it becomes dangerously hot in summer sun and can damage skin during cold weather. Climbing structures should be accessible by staff for routine sanitation, repairs and updates and include:

- horizontal and vertical elements with sufficient pathways throughout the enclosure to ensure subordinate individuals do not reach 'dead ends' in the enclosure;
- locations and/or mechanisms to provide enrichment above ground level;
- resting platforms or perches and handholds of varying size that large and small animals can securely grasp for support;
- a minimum of 50% of total climber space designed to allow access by individuals of all ages and physical capabilities;
- soft substrate such as soil, bedding material, mulch or leaf litter is installed below climbers to minimize risk of injuries from falls, especially to youngsters and older individuals.
- Ideal design allows periodic reconfiguration of some or all of the climbing structures to introduce change and keep prosimians challenged and engaged.

g. Perching

- Horizontal perching areas and platforms are provided to allow resting, sleep, social behavior and feeding above ground.
- Placement of perches or platforms includes consideration for access to animals for close observation, medication or training sessions.
- Perches and benches are accessible to staff for cleaning.

h. Other Materials

- Canvas fire hoses used for climbing elements, runways and hammocks are secured in a manner that prevents animals from becoming entangled in long lengths or trapped in openings.
- Cargo nets are selected with a diameter that ensures youngsters may not become trapped in the net.
- Ropes are secured at both ends with sufficient tension to prevent an animal from becoming entangled. Frayed portions of rope are removed immediately.
- Logs are placed and secured in a manner that prevents them from rolling or falling onto animals.

Indoor Enclosures

i. To the greatest extent possible, all visual barriers, climbing structures and perching surfaces meet outdoor enclosure criteria.

j. Indoor furniture is constructed of materials that can be sanitized or easily replaced when they become overly soiled. Furniture is accessible to staff for routine cleaning and repair.

k. Benches, perches, and other structures allow for climbing and for sleeping above ground level.

Shift Yards

l. To the greatest extent possible shift yards meet outdoor enclosure criteria for plantings, trees, topography, visual barriers, climbing structures, perching surfaces and materials used.

H-7 Sanitation

Proper sanitation is practiced to reduce pathogen transmission.

General

a. Local, county, state laws regarding proper waste removal are observed.

b. Where possible, prosimians are transferred from enclosures prior to cleaning, disinfection and/or sanitizing.

c. As fomites (shoes, clothing, etc. which carry infectious materials) may be a source of zoonotic disease, all who may come in contact with such materials are made aware of these risks and trained accordingly. (*See also* Standard V-8, "Zoonotic Disease Program").

d. Uneaten perishable food is removed within a timeframe appropriate for the type of foodstuff and size of enclosure, prior to molding or contamination.

Removal of Animal Waste

e. Animal waste is removed from the habitat as often as necessary to prevent contamination of the prosimians contained therein, to minimize disease hazards and to reduce odors. This also enables caregivers to collect fecal samples in a timely manner.

f. Soiled bedding material and substrate are removed and replaced with fresh materials daily, or as needed to prevent buildup. If odorous, bedding is changed regardless of how long in place.

g. Damaged and soiled enrichment items are removed daily, or as soon as possible.

h. Efforts are made to prevent native wildlife getting access to prosimian waste.

Tools

i. Each enclosure has dedicated tools to prevent cross contamination between enclosures. When resources restrict the ability to have dedicated tools, tools are disinfected between enclosures to prevent the spread of parasites and disease.

j. Tools are labeled when use is restricted to specific areas.

k. Tools used for New World primates are not used for prosimians.

l. Sanitation tools or equipment, including wheelbarrows, are not used for transport or storage of foodstuffs or bedding.

Cleaning and Disinfection

m. Feeding areas, automatic water devices, water and food containers are cleaned and disinfected daily.

n. Care is taken to minimize overspray of waste, directly or via aerosolizing, into adjacent cages during cleaning.

o. Animals are not present in enclosures being cleaned using power hoses. Care is taken to prevent accidental spraying of animals in adjacent enclosures when power hoses are used for cleaning.

p. Concrete floored enclosures are dried with a squeegee, and as needed fans, to ensure floors are dry before bedding material is replaced.

q. All hard surfaces including walls, floors, ceiling, benches, climbing structures, cage mesh and caregiver work areas are sanitized regularly to the extent possible. Note that in large outside enclosures with plenty of exposure to sunshine and rain, there may not be a need for regular scrubbing and cleaning but areas are monitored for potential sanitation problems.

r. Cleaning and Disinfection Standard Operating Procedures are developed and followed to address:

- safe disinfectant use to prevent hazards to the prosimians, caregivers and the environment;
- cleaning and disinfecting protocols for food preparation and veterinary care areas using more powerful disinfectants on hard surfaces;
- daily, weekly, monthly and quarterly cleaning schedules for all hard surfaces including walls, floors, ceiling, benches, cage mesh and staff work areas are designed to minimize the risk of disease transmission;
- disinfectants and other cleaning products stored separately from foodstuffs.

s. A Material Safety Data Sheet (MSDS) or equivalent is readily available for all cleaning products in use and all containers are properly labeled as to contents.

Laundry

t. Laundry for prosimians is done in a washer/dryer used to wash items soiled by animals only (*e.g.*, towels, blankets, enrichment items).

u. Specific disease exposure of species from research settings is taken into account when handling prosimian laundry.

H-8 Temperature, Humidity, Ventilation, Lighting

Temperature, humidity, ventilation, and lighting are appropriately addressed.

Temperature

a. The temperature is within an acceptable range for the species housed.
- Weather is considered in addition to temperature.
- Allowance is made to accommodate individual animals not able to tolerate temperatures above or below the usual range of comfort for the species.

b. For outdoor enclosures and shift yards, prosimians have access to heated or cooled areas when ambient temperature falls below 65ºF (18ºC), adjusted for wind chill, or rises above 90˚ F (32ºC). Great caution is taken with elderly, infant and disabled prosimians.

- Windbreaks are sufficient in number to accommodate all prosimians simultaneously with consideration for social structure and relationships within and among groups.
- Shade is available throughout the day in a number of areas, which provides an adequately sized space to accommodate all prosimians simultaneously with consideration for social structure and relationships within and among groups.
- Care is taken to prevent direct prosimian contact with heat sources. Note: Infrared bulbs or 'heat lamps' are not recommended as heat sources due to risks associated with bulb breakage and tissue damage in the primates.

c. For indoor enclosures, an average ambient temperature range of 65ºF (18ºC) and 86ºF (30ºC) is recommended. However, most prosimians can tolerate temperatures between 55ºF (12.7ºC) and 65ºF (18ºC) for short periods of time when supplemental bedding and heat is provided.

- Heat can be provided by forced air or hydronic heating systems. Note: Infrared bulbs or heat lamps are not recommended due to risks associated with bulb breakage and tissue damage to the animals.
- Cool air is provided by refrigerant air conditioning, "swamp coolers", fans, or misters when ambient temperatures rise above 85ºF (29.4ºC).
- Providing prosimians with opportunities to choose temperature ranges within an enclosure is preferred. This can be achieved by access to areas near heat vents, skylights, or hog warmers for example.
- Even when ambient temperatures are 'warm', bare concrete floors, especially damp floors, are too cold for many individuals and are not considered suitable substrate or housing for prosimians.
- Some species of lemur may need to be locked into indoor housing during severe weather as they will often not enter these enclosures on their own.
- Any climate control systems include redundancy and back-up power in case of equipment or power failure.

Humidity

d. Optimal indoor humidity is between 50% and 70%. Humidity should not be kept above 80% in controlled environments to prevent fungal and mold growth. High humidity can be mitigated through proper ventilation or dehumidifier systems.

- Misters are provided in tarsier enclosures to prevent health problems.

Ventilation

e. Proper ventilation of indoor enclosures is critical to maintaining prosimian health.

- In these areas, heat recovery ventilators and energy recovery ventilators can provide fresh outdoor air with minimal heat loss.

f. To the extent possible, indoor enclosures have a negative air pressure, with regular exchange of non-re-circulated air.

- A minimum of one complete air exchange per hour is recommended.

g. To the extent possible, separate air handling systems are maintained between animal areas to prevent disease transmission.

h. Proper window and door placement can ensure sufficient cross-ventilation in warm climates.

Lighting

i. Light, natural and artificial, is appropriate for the species housed in terms of intensity, spectrum and duration.

j. Indoor enclosures - Natural lighting is optimal and can be obtained using skylights, windows, roll-up doors and other means. Glass bricks may be used, taking into account the fact that light intensity will be less than with clear glass.

- Supplemental lighting is provided to ensure adequate light for caregivers to observe animals, clean enclosures and perform related animal care tasks.
- When animals are confined indoors overnight, sufficient lighting is used to extend the daylight period to a natural day/night cycle for the species housed to allow animals time to eat and select sleeping sites.
- Consideration is given to providing nightlights to prevent aggression between social groups that may result from surprise encounters in darkened areas.
- Nocturnal lighting has blue filters to prevent interference with light cycles.
- Dimming systems are used to prevent stress from sudden exposure to bright light or complete darkness.
- In northern climates, where natural light is less intense and of shorter duration during the winter months, full-spectrum bulbs may be used to ensure prosimian health.

k. Outdoor enclosures and shift yards - While not necessarily required, consideration is given to supplemental lighting or power sources for use in outdoor areas in event of an emergency. Tamper-proof lighting is used in prosimian enclosures.

NUTRITION REQUIREMENTS

N-1. Water

Fresh clean water is available in sufficient quantity.

Quantity

a. Fresh clean water is available at all times to all individuals.

b. Multiple water sources are available for group-housed prosimians to ensure high-ranking individuals do not dominate water sources.

Quality

c. Water quality parameters are maintained at a generally acceptable level for prosimians in terms of turbidity, salts, etc.

d. Potable water sources are tested for contaminants annually.

e. All water sources (including water bowls and bottles) are cleaned at least daily, and more often if needed.

f. If automatic water devices are not used in hot climates, water sources are shaded or changed multiple times to avoid overly hot water.

Automatic Water Devices

g. Devices are tested daily to ensure water is available.

h. Devices are easily disabled when animals must be fasted for medical purposes.

i. When monitoring of water consumption is required, an alternative means of providing water is devised.

j. In colder climates, steps are taken (such as installation of heat sources) to ensure water consumption does not decrease with lower ambient air temperatures.

N-2. Diet

A properly balanced and healthy diet is provided appropriately based on the needs of each prosimian, following veterinary instructions for special needs.

General

a. A veterinarian or qualified nutritionist periodically reviews all aspects of the prosimians' diet at the sanctuary.

b. Diets of individual prosimians (including vitamin supplementation) are of a quality, quantity and variety to match the physiological and psychological state of the individual as it changes over time, with consideration for the age, life stage, species, condition, and size of the individual.

c. Food is wholesome, palatable, free from contamination and of sufficient quantity and nutritive value to maintain all prosimians in good health.

d. The sanctuary utilizes a feeding regimen that ensures each individual receives adequate nutrition regardless of status in social group.

e. Where possible and appropriate, each prosimian's daily dietary needs are documented and made available to animal care staff.

f. In large enclosures, routine observation of feeding activity ensures all animals are able to access sufficient food.

g. Commercially prepared diets are not the sole diet for prosimians, but are fed as a core part of a diet which includes of fresh fruits and vegetables, greens, and other whole foods as species appropriate.

- The natural diet of each prosimian species is taken into account when developing sanctuary diets.

- At a minimum, leafy greens, vegetables and fruit are fed every other day.
- Lorisids are provided with hard elements in their diet for cleaning and plaque removal from tooth combs and canines.
- Insectivore and omnivore diets include insects.

h. Prosimians are not fed New World primate diets. Old World primate diets are suitable for most prosimians. High fiber diets are suitable for herbivorous prosimians.

i. Commercially available insects including crickets, mealworms and waxworms are provided regularly to insectivorous species and can be offered occasionally in the diet of other species.

- Live prey is provided to tarsiers.

Browse and Fresh Produce

j. Fresh browse is offered daily, particularly for animals housed indoors, to promote natural feeding behaviors. If not naturally present in the outdoor enclosure, browse items are provided on a regular basis. Materials offered include bark that is easily stripped and consumed, leaves, seeds, flowers and shoots.

k. When fresh plant material is not available (seasonally) alternative forage materials can be offered such as timothy hay, sudan hay, orchard grass, alfalfa and other locally available grasses or legumes.

l. The fresh produce portion of the diet is not heavily dependent on over-ripe and/or sugary fruits.

m. All browse items are nontoxic and grown without chemical pesticides. Caregivers are trained to identify safe, non-toxic plant species appropriate for prosimians.

Vitamins/Supplements

n. Prior to offering supplemental vitamins, the health and condition of the individual prosimian, as well as the diet, is reviewed by a nutritionist experienced in prosimian care and/or the attending veterinarian.

o. Lemurs are not given supplements that include iron, and vitamin C levels are monitored to reduce the risk of hemosiderosis.

Treats/Enrichment items

p. Preferred food items from the basic diet can be reserved for enrichment through the use of puzzle feeders and other food enrichment devices/techniques.

- Browse is included as part of enrichment for herbivorous and omnivorous species.
- Flowers and fruit are included for frugivorous species.
- Seeds, nuts, cereals and grains, if used, are fed infrequently, in small quantities and dispersed throughout the enclosure.

q. The calories in foods used as enrichment are considered when planning the overall diet.

N-3. Food Presentation and Feeding Techniques

Food is prepared and presented in a safe and appropriate manner to meet the prosimians' health and social needs.

General

a. Feeding and drinking receptacles are placed in positions that minimize the risks of contamination from soiling by the prosimians themselves, wild birds, rodents and other potentially invasive species.

b. Food receptacles, where used, are appropriate for the species housed in terms of number, size and placement, and are cleaned daily.

c. Receptacles for animal food and water are designed to minimize spillage and are not used for any other purpose.

d. Food items are placed above floors to minimize contamination from urine and feces. Feeding stations placed at higher levels provide a more natural feeding experience for arboreal prosimians.

e. Prosimians are offered their diet a minimum of once daily and preferably twice daily, with sufficient daylight hours remaining to allow necessary forage time.

- If fed once daily nocturnal species are fed late in the day to ensure sufficient food is available during their primary active period overnight.
- Single feeding regimens are carefully monitored and reviewed frequently to ensure they meet the nutritional and psychological requirements of the prosimians.

Feeding Techniques

f. Variations in food presentation are considered part of the enrichment program for prosimians. Distributing food throughout an enclosure allows natural foraging behavior and may limit food hoarding.

g. Feeding in multiple locations helps to ensure that low-ranking individuals have adequate access to food and water.

h. Food items are dispersed widely throughout enclosures to reduce or eliminate aggression that results from competition for food resources, especially preferred items.

i. Produce cut into small pieces allows for more items to be dispersed in the enclosure and for prosimians to store items in cheek pouches. Whole food items increase manipulation and processing time.

j. Fruits and vegetables may be fed frozen as part of an enrichment program.

k. To ensure that subordinate individuals receive enough food without overfeeding dominant individuals, cooperative feeding techniques (in which dominant individuals are rewarded for allowing subordinate individuals to obtain food) may be used.

Diet Changes, Increases or Decreases

l. Adjustments made to an already formulated and nutritionally balanced diet are made to the entire diet to ensure continued nutritional balance.

m. Considerations for diet increase include weight and condition of all animals in the group, overall food consumption, activity level of the group, feeding competition and other medical or behavioral considerations.

n. Diet increases or decreases are made in modest increments with animal response to the change assessed for a minimum period before additional changes are made.

o. Underweight individuals experiencing health or behavioral problems may be separated for supplemental feeding as needed to avoid undesirable weight gain in conspecifics.

N-4. Food Storage

Food is stored appropriately.

a. Separate and secure facilities are provided for proper and hygienic storage of food.

b. Dry goods (*e.g.*, grains and biscuits) are stored in clean, dry storage areas in sealed containers or on pallets. Products are dated and rotated to use oldest stock first, and expired food as well as bags damaged by pests is discarded.

c. Produce is stored in a clean, dry refrigerator, and is ordered at regular intervals in amounts that can be used prior to spoilage.

d. Items frozen for use are dated and labeled, and no frozen items are thawed and refrozen. Items that are not fed frozen are thawed in a refrigerator to minimize risk of spoilage.

e. Browse, grass hay, alfalfa and other baled products are stored in a sheltered area on pallets, and oldest stock is used first.

f. Insects are housed per instructions from the provider or in appropriate insect colony housing. Insects intended for use as food are housed in appropriate containers to prevent contamination by insect pests.

N-5. Food Handling

Food is handled and prepared in an appropriate manner to retain nutritional value, freshness, and freedom from spoilage, invasive species or other forms of contamination.

a. Food is protected against dampness, deterioration, mold, and/or contamination by insects, birds, rodents or other animals.

b. No food that is spoiled or otherwise contaminated is served.

c. Fruits and vegetables fed to insect colonies are changed often to prevent consumption of spoiled food items.

d. Diets are prepared in a safe and hygienic manner to reduce the possibility of contamination or spoilage.

e. Food preparation techniques meet all local, state/province, and national regulations.

f. Separate cutting boards, utensils and food preparation surfaces are used when meats, fish and produce diets are prepared in a common kitchen area.

g. Foods not fed frozen are thawed in a refrigerator to minimize risk of spoilage. Frozen foods are not thawed and refrozen.

h. Food preparation surfaces are thoroughly cleaned after use.

i. Staff and volunteers wash hands thoroughly prior to handling food, and wearing gloves during food preparation is recommended.

Veterinary Care

V-1. General Medical Program and Staffing

There is a written veterinary medical program, overseen by a veterinarian, with adequate support staff at the Sanctuary, with 24/7 veterinary care available on call.

a. The sanctuary has a written veterinary medical program, including long term preventative medical protocols, disease surveillance and containment procedures, that is developed and carried out under the supervision of a licensed veterinarian – the attending veterinarian - who has training or experience in providing medical care for the prosimians and other species housed at the sanctuary, and who is aware of any specific health issues of the prosimians at the sanctuary.

b. One or more full-time veterinarians specifically concerned with the veterinary medical program is highly recommended for sanctuaries whose budget will support the salaries of such trained personnel. Sanctuaries unable to employ a full-time veterinarian have access to a part-time veterinarian, under a contractual or other similar arrangement, with training and appropriate experience with the prosimians housed at the sanctuary.

c. Veterinary care is available 7 days per week and 24 hours per day for the sanctuary on an on-call basis when a veterinarian is not physically on grounds. When the primary veterinarian is unavailable, there are other suitably experienced veterinarians on call.

d. There are support staff to carry out the following roles: (1) Husbandry (prosimian caregivers), (2) Technical (medical technologists, veterinary nurses, or individuals trained at the sanctuary), and (3) Clerical. The sanctuary has available properly trained and qualified professional and supporting personnel as necessary to implement these roles.

e. A staff member is trained to serve as medical program director, dealing with emergencies until a veterinarian arrives or is reached. He or she is able to direct any restraint of the prosimians, perform basic first aid, be responsible for administration of post-surgical care, and be skilled in maintaining appropriate medical records.

f. Medications are stored appropriately on site, according to label directions. Medications requiring refrigeration are stored separately from food items.

V-2. On-Site and Off-Site Veterinary Facilities

Veterinary facilities are appropriately located, designed and equipped.

a. Any on-site veterinary facility at the sanctuary meets all local and state/province building regulations.

b. Surfaces in the on-site veterinary facility with which prosimians can come in contact are non-toxic and can be readily disinfected.

c. The on-site facility is located away from areas of heavy public use to minimize noise levels for hospitalized prosimians.

d. The on-site facility has separate areas for any of the following veterinary functions performed on-site: physical examinations, medical treatments, enclosures for hospitalized prosimians, sterile surgery, necropsy, medical quarantine enclosures, laboratory, radiology (if done on-site) and pharmaceuticals storage which includes, when necessary, a safe for narcotics that meets the standards set by applicable regulations (*e.g.*, the Drug Enforcement Administration [DEA] in the United States).

- Food preparation areas, storage areas and staff locker room/housing with showers are separate from the medical facility.
- Appropriate capture and restrain equipment is available.
- Within the facility, floors slope to drains, surfaces are non-absorbent and non-impact resistant and appropriate air handlings systems are in place.

e. If the sanctuary does not have an on-site veterinary facility, or only a partially outfitted veterinary facility, it has a contract or similar arrangement with a nearby veterinary hospital for off-site diagnostics and treatment as needed. The hospital should have a sterile surgical facility with anesthetic equipment, radiology equipment, a laboratory, and pharmaceutical storage. If necropsies are performed at the hospital, there is a separate area for necropsies and a separate storage refrigerator for storage of carcasses.

f. See also Standard V-4, “Diagnostic Services, Surgical, Treatment and Necropsy Facilities."

V-3. Preventative Medicine Program

The sanctuary has a complete preventative medicine program.

a. Appropriate preventative medicine programs are in place to manage all prosimians, with special attention paid to geriatric animals.

b. The preventative medicine program includes quarantine procedures, parasite surveillance and control, immunization, contraception, infectious disease screening, dental prophylaxis, and periodic reviews of diets, husbandry techniques and invasive species control.

c. When circumstances permit, and as appropriate for the individual animal, an overall examination is performed annually, blood is collected, serum banked as a baseline control and the results are recorded. The attending veterinarian, in consultation with the

sanctuary director, determines any schedule for routine physical examinations, including ocular, dental and musculoskeletal assessment, and implements any necessary treatment.

d. A veterinarian, veterinary technician/nurse, or other trained personnel performs regular fecal examinations to look for pathogens (random enclosure sampling is adequate for group-housed prosimians). Results are recorded. Fecal examinations are repeated following treatment to evaluate efficacy.

e. All prosimians are immunized as recommended by the attending veterinarian, using currently recommended procedures and products as appropriate for the country, species and individual. Where possible, killed vaccines are utilized to minimize the potential for adverse reactions. Schedules and products are dictated by the disease status of domestic and wild animals in the area surrounding the sanctuary and relevant local and national laws.

f. When prosimians are immunized, the type, serial number, and source of product are recorded in the individual animal's medical record.

V-4. Diagnostic Services, Surgical, Treatment and Necropsy Facilities

Diagnostic services, surgical facilities and services, medical treatment for sanctuary prosimians and necropsy are all high quality, humane, professional, legal, and safe.

Diagnostic Services

a. Diagnostic laboratory services are available on- or off-site to assist with the evaluation of prosimians and the diagnosis of disease.

- Where diagnostic services are performed on-site appropriate safety equipment and training is in place, *e.g.* as radiation exposure monitoring, personal protective equipment and hazardous material handling equipment; and there is a maintenance program in place for X-ray machines and other laboratory equipment.
- Diagnostic capabilities include radiology, cytology, microbiology, parasitology, complete blood count, blood chemistry, urinalysis, serology and other appropriate laboratory procedures.

Surgical

b. The sanctuary has access to surgical facilities (either on-site or at a nearby veterinary hospital) that are clean, free from excessive noise and unnecessary pedestrian traffic, have adequate lighting, ventilation, and temperature controls, and can be easily cleaned and disinfected. For sanctuaries utilizing an off-site aseptic surgical facility, an on-site area that can be adapted for occasional or emergency aseptic surgical use is available.

c. Surgical facilities have access to appropriate anesthetics including injectable anesthetics, reversal agents, etc. Where gas anesthetic equipment including scavenger units, is used, equipment is cleaned and calibrated and filters are replaced, annually at a minimum. Gas cylinders are safely stored and replaced regularly. Facilities have sterilized surgical packs, surgical preparation solutions, intravenous fluids, fluid administration equipment, pulse oximetry, heart monitoring equipment (*e.g.* electrocardiogram, stethoscope), and

emergency drugs on-site with appropriate maintenance and/or replacement schedules for each.

d. If on-site, the sanctuary ensures that surgical equipment is maintained in good working order and is on a program of routine preventive maintenance.

e. Only a licensed veterinarian performs surgery, using standard operating procedures. (Note: A veterinary technician/nurse, appropriately trained by a veterinarian in states or provinces where such action is permitted by veterinary practice acts, can perform surgical first aid.)

f. The veterinarian uses aseptic surgical procedures whenever applicable.

g. Veterinarians and support personnel are compassionate and knowledgeable about the humane aspects of prosimian treatment, including the proper use of anesthetics, analgesics, and tranquilizers.

h. Surgical incisions are observed daily, or as frequently as possible while minimizing stress to the prosimians, for signs of dehiscence or infection. Analgesics are administered post-operatively when appropriate.

Treatment

i. Medications are maintained and used in accordance with local, state/province, and national laws and regulations and are administered in accordance with the state veterinary practice act, or equivalent outside the US.

j. The sanctuary has a pharmacy on-site where routinely used drugs, such as emergency resuscitative medications, antibiotics, anthelmintics, fluids, anesthetics, analgesics, tranquilizers, etc are maintained.

k. All medications are purchased, prescribed and administered under the guidance of the veterinarian.

l. When distributed to prosimian caregivers, medications are properly labeled and packaged, with the contents identified and instructions for the amount, frequency and duration of administration as well as the name and identification of the prosimian to receive the medication, the expiration date of the medication, prescribing doctor and number of refills if any.

m. All medical treatments and drug prescriptions are documented in the prosimian's medical record.

n. Basic physical capture and restraint equipment to facilitate medical treatment is available at the sanctuary.

Necropsy

o. Whenever possible, there is an isolated area on the grounds for performing necropsies, or appropriate storage facilities for holding the deceased prosimian until the body can be transported to a facility for a postmortem examination as soon as possible, understanding that necropsies performed longer than 24 hours after death may be of limited value due to autolysis of the body. (Note: Any refrigerated area for holding dead prosimians is physically separate from live prosimian holding, treatment, and surgery areas and from food supply storage or preparation areas.)

p. Disposition of dead prosimians and their parts meet all legal restrictions.

q. Dead specimens not used are incinerated or disposed of as deemed suitable by the veterinarian in accordance with local, state/province and national regulations.

V-5. Quarantine and Isolation of Prosimians

Appropriate quarantine and isolation policies and accommodations are in place and utilized.

a. Upon arrival, all prosimians undergo quarantine for a minimum of 30 days, according to the protocol established by the attending veterinarian, or for a greater period if required by applicable law. The quarantine period may be longer for prosimians that have received minimal screening prior to arrival, such as animals from the wild. Prosimians previously housed together may be quarantined together.

b. If the sanctuary does not have an adequate quarantine facility, steps are taken to have prosimians undergo quarantine under these guidelines prior to their arrival.

c. Local, state/province, or national regulations regarding quarantine of newly arrived prosimians are followed.

d. All utensils and outer clothing used in quarantine are restricted to that area.

e. Protective clothing, boots and footbaths are used by all staff entering the quarantine area or areas containing quarantined animals. Quarantine clothing is not removed from the quarantine area, except in a sealed container for cleaning.

f. Caregivers wear protective gloves and masks when cleaning or handling anything with which the quarantine prosimians come into contact.

g. Where possible, staff working in quarantine areas does not work with other sanctuary animals. If this is not possible, work is done in the quarantine areas last.

h. Quarantine staff cares for newly admitted prosimians in their quarantine area before caring for sick animals, which are housed in separate isolation enclosures.

i. The quarantine area allows for daily cleaning and sanitation, either with removable catch trays or a drainage system that allows fecal matter to flush into a septic system; waste is otherwise removed and disposed of properly.

j. In enclosures housing animals carrying infectious or transmissible diseases, to the extent possible, all surfaces of the enclosure are properly sanitized.

k. Quarantine areas have adequate ventilation, heat and air conditioning, which are used to ensure optimum conditions, particularly in the case of young, elderly or sick prosimians who may be more sensitive to environmental changes.

l. Quarantine animal waste is handled separately from all other manure or compost at the facility. Because of the risk of disease transmission, quarantine waste is not spread on pastures or composted.

V-6. Medical Records and Controlled Substances

Complete medical records and appropriate statistics are maintained, prosimians have permanent identification, and controlled substances are prescribed and stored legally.

Medical Records

a. An electronic database format is recommended for most record keeping, but in either case, the sanctuary has a back-up system for the records.

b. Records that, if not required by law, are required by GFAS include but are not limited to:

Individual Records

- Individual animal records showing origin, age, species, gender, microchip number, tattoo, photo, bio, etc.;
- Individual veterinary record;
- Reproductive history, if known;
- Contraception records;
- Weight, current diet and record of diet changes;
- Food consumption and preferred food items;
- Enrichment dates, items used and prosimian's response;
- Where applicable and appropriate, any positive behavioral management records showing completed objectives and those in development;
- Current and historic cage mates, social groups and partners, including response to various phases of introduction and response to other individuals;
- Acquisition documents;

Group Records

- Welfare assessment for the prosimians as a whole including measures of: disease prevalence, morbidity and mortality rates, activity levels;
- Inspection reports, as applicable, from international, national, state/province and local agencies, as well as accrediting organizations;
- Other animal documentation as applicable, such as complaints or police reports pertaining to specific animal, and animal escape reports.

c. Medical records are dated, legible and indicate examination findings, treatments (types of medication, dosage, duration), surgical procedures, anesthetic procedures (type of agent, dosage, effect), results of all laboratory tests (parasitologic, hematologic, bacteriologic, etc.) pathology reports, plus immunization records with all relevant dates, prosimian identification and nutrition/diet information, and, where applicable, necropsy reports.

d. Copies of medical records accompany any prosimian who is transferred to another sanctuary.

e. Medical records are maintained under the direction of the veterinarian or trained prosimian caregiver. Where possible, duplicate record sets are stored at another site, or in a fire proof or theft proof safe on site or an online storage system.

f. Statistics are tabulated regularly on the rates and nature of illness and mortality in the sanctuary.

Controlled Substances

g. Only a licensed veterinarian prescribes controlled substances used at the sanctuary, and all such substances are secured in accordance with any applicable laws.

h. The sanctuary maintains appropriate records and logs for all controlled drugs used. All drug logs are kept up to date and comply with any national or other legal requirements (such as the Drug Enforcement Agency in the U.S.).

i. Expired controlled drugs are marked as such and stored separately.

j. Controlled drugs are discarded in accordance with applicable national, state, and local law and regulations (such as the USDA and DEA in the United States).

V-7. Breeding

No intentional propagation of prosimians occurs, and sound practices are in place and implemented to prevent propagation and to properly care for infants born at the sanctuary.

a. Although GFAS recognizes the importance of appropriate "conservation breeding" programs, they fall outside the mandate of GFAS Accreditation programs unless they adhere to the following guidelines:

- Animals are not brought into captivity for the purpose of breeding. Animals that are allowed to breed should enter a wildlife facility as a result of normal acquisition protocols such as surrender or government confiscation and be considered an endangered or threatened species with available release sites within the state/province, conducted with specific conservation goals, in accordance with local, state/province, national, and international law and regulations.

- Breeding should not be forced – that is, not the result of artificial insemination or being placed in enclosures of insufficient size or otherwise not in keeping with GFAS standards.

- Breeders – that is, the parent animals – should be released into the wild with their young. If breeding animals are deemed unreleasable, there should be documented evidence from a qualified professional that the animals cannot be released because of a physical condition or other reason that would make them unable to survive in the wild. Offspring of unreleasable parents should not be released until an age of species-specific maturity for survivability.

- Unreleasable breeding animals should receive the care required of all animals under the GFAS standards and should not be maintained for the purpose of breeding if they have incurable or unmanageable pain or suffering and do not have an acceptable quality of life.

- The facility should have an identified release site for the breeding animals and offspring, with any necessary permits or memoranda of understanding in place. While GFAS may consider whether a definite plan (such as ongoing surveys of land for potential release

sites and a timeline for releasing animals) is sufficient, it will not be sufficient for a facility to simply say that it hopes or plans to be able to release the animals one day. Thus, a facility may not breed any animals in captivity, even highly endangered animals in order to create a sustainable population, without a definite release plan in place.

b. The sanctuary has a protocol in place to ensure that all mixed-sex groups are contracepted. Single-sex groups do not require contraception. Choice of method is based on present best practice and attending veterinarian recommendations.

- In most situations where prosimians are to remain captive, males may be vasectomized or castrated to allow for flexibility in future social groupings.
- Vasectomies are the preferred method of male contraception for permanent sanctuary residents, and are performed by a veterinarian experienced in the procedure. Recently vasectomized males are kept isolated from females until it is established that the animal is not capable of reproducing.
- Castration may be an acceptable form of male contraception, particularly in cases of testicular pathology.
- While ovariohysterectomy is an effective form of contraception, it is only performed in cases of reproductive tract pathology as the procedure may have significant behavioral implications.
- Female prosimian contraception may be considered in some cases. The method of contraception used is based on current best practice and attending veterinarian recommendations.
- If females arrive at the facility pregnant, the sanctuary provides necessary care and the female is allowed to deliver unless there are valid health reasons for terminating the pregnancy, or unless the attending veterinarian feels the pregnancy is in such an early stage that aborting the fetus is an option, if so desired by the sanctuary. After delivery, reproductive control methods are applied after allowing adequate time for weaning as appropriate for that prosimian, provided there is no further opportunity for breeding during this period of time.
- In range state sanctuaries where the possibility of release back to the wild exists, reversible forms of contraception are preferred.
- Infants born at the sanctuary remain with the mother and social group as appropriate for natural rearing, provided there is no further opportunity for breeding during this period of time.
- Infants are only removed from parents for hand-rearing if there is a threat to the life of the infant or the mother.

V-8. Zoonotic Disease Program

The staff and sanctuary veterinarian are knowledgeable about zoonotic diseases that may affect prosimians at the sanctuary, and implement appropriate policies and procedures as needed to mitigate risk and deal with any exposures that occur.

a. The sanctuary's veterinarian is knowledgeable about zoonotic diseases that may affect prosimians at the sanctuary. The sanctuary has emergency procedures and a defined process to avoid transmission of potential or emerging diseases through bites, scratches, body fluids, direct contact with prosimians and other means. (Note: Additional precautions may be necessary for staff classified as increased risk of disease, including those who are immune-compromised.)

b. Personnel have adequate training to understand the potential risk of disease transmission, including potential sources of disease, modes of disease transmission, and clinical signs associated with disease.

c. All personnel are informed when a zoonotic disease occurs at the sanctuary.

d. Staff has any appropriate tests and immunizations prior to employment and annually thereafter, as appropriate for the country, prosimian species and individual.

e. When a reportable disease is identified, all appropriate local, state/province, and national regulatory officials are contacted.

f. All areas in which the staff has direct contact with prosimians have hand-washing facilities available in the immediate vicinity (or an equivalent; e.g., bactericidal hand-wipes)

g. Human food consumption by the staff does not occur in the immediate area of prosimian contact.

V-9. Euthanasia

Euthanasia is governed by an ethical written policy that includes identification of appropriate personnel and procedures.

a. The sanctuary has a written policy addressing the circumstances surrounding euthanasia decisions and procedures, including the following:

b. Euthanasia is performed in compliance with any national or local law, administered under the strict supervision of a licensed veterinarian. In extreme circumstances of animal suffering when a veterinarian is unable to reach the sanctuary in a timely manner, an emergency method of euthanasia may be required and is performed by a trained and qualified staff member when no other humane option is available.

c. Euthanasia is in the best interest of the individual animal only used as a final option, and is not used as management tool (such as a means to create space for more animals).

d. Acceptable reasons for euthanasia include:

- Incurable disease/injury that is likely to cause unmanageable pain or suffering;
- Disease/injury where treatment is likely to cause unreasonable pain or suffering;

- Disease/injury where treatment will not be effective in restoring the prosimian to an acceptable quality of life;
- Disease/injury where treatment is beyond the normal community standards of monetary expenditure and would cause an excessive burden on the sanctuary resources, and no other sanctuary can step in, after reasonable efforts to locate such a sanctuary;
- The process of aging has resulted in an unacceptable quality of life;
- In the event of presenting an infectious disease risk to some or all of the residents.
- For facilities engaged in the rehabilitation and reintroduction of wildlife, it is determined in accordance with an appropriate protocol or other "decision tree" analysis that an animal cannot be reintroduced to its natural habitat and there is no appropriate (consistent with these standards) long-term care option.

e. Euthanasia is performed so that it avoids distress to the prosimian, and unless impossible, is performed out of view of other prosimians.

g. The species and ecosystems are carefully considered during disposition activities.

Well-Being and Handling of Prosimians

W-1. Physical Well-Being

All prosimians are routinely monitored to ensure their physical well-being. All aspects of husbandry, including veterinary care, environmental enrichment and diet are designed to optimize the prosimians' physical well-being.

a. The welfare of each individual prosimian is the overriding consideration in all sanctuary actions.

b. Prosimians are able to enjoy lives that are as close as possible to that of their wild counterparts as regards stimulation and interest through adopting husbandry and management procedures, including appropriate housing and enclosure design, environmental enrichment programs, positive reinforcement behavioral programs and a balanced diet to meet nutritional requirements.

c. Prosimians are provided with opportunities to climb, nest, forage for food and play by providing species-appropriate climbing structures, places to hide and rest in comfort, and a variety of plants and substrates and other enclosure enhancements where food/enrichment items can be hidden.

d. Regular assessments are performed in an effort to quantify and measure the welfare of individual animals through monitoring of nutritional, physical and social conditions. Qualified personnel conduct daily observations of each prosimian to monitor for signs of physical abnormalities. Any unusual activities are recorded in a log at each inspection. Sudden changes in food consumption and other behaviors are immediately brought to the attention of supervisory staff. Note: Where it is not possible to observe each animal on a daily basis, time is spent observing all prosimians on at least a weekly basis, an accurate population count is maintained and health issues monitored.

e. Where possible and appropriate, records of individual prosimians are kept to provide both behavioral and veterinary history.

f. Where possible, each prosimian is weighed annually, either during a routine physical or through the use of a built-in scale, to monitor for signs of illness and to determine dosages for chemical anesthetics.

g. Positive reinforcement training may be appropriate for those prosimians who enjoy interacting with people to provide additional enrichment, reduce the need for chemical immobilization and to reduce stress during medical intervention.

W-2. Social Housing

Prosimians are grouped appropriately with the safety of animals and staff in mind.

General

a. Prosimians housed in the same primary enclosure are compatible.

b. Prosimians are not housed near animals that interfere with their health or cause them physical or psychological discomfort.

c. Habitats are of sufficient size to allow appropriate space between individuals, within and between social groupings and to allow for temporary isolation from conspecifics.

d. Prosimians are housed so that no individual endures constant harassment or suffers physical injury, nor do social behaviors prevent any individual from maintaining proper nutrition and hydration.

e. Solitary housing is generally temporary and reserved for situations including, but not limited to: quarantine; medical assessment and/or care; lack of appropriate social partners or social tension resulting in disruption to the group or physical aggression leading to injuries.

f. The sanctuary has the ability to separate and isolate animals to address behavioral concerns. If prosimians are isolated for social reasons, all efforts are made to find a suitable social group within the facility or at another accredited institution.

Social Housing

g. The individual developmental and social history of each prosimian is taken into consideration when determining social groups.

h. There is adequate space and options are available for individuals or paired prosimians to separate or hide from the group.

i. Group structure for prosimians may include single male-multiple females, same sex groups or non-breeding pairs with juveniles, dependent on species.

Mixed Species Housing

j. Prosimians are not housed with New World primates.

k. Prosimians have been successfully housed with other prosimian species, ungulates, tortoises and porcupines.

W-3. Introduction of Unfamiliar Individuals

Introduction of any new prosimian to a social group is done according to techniques appropriate for each species, with staff safety ensured.

a. Introduction of unfamiliar prosimians is carefully considered. Professionals with experience in social introductions, if not on staff, are consulted whenever possible during these considerations.

b. As needed and possible, information listed below is gathered for the introduction planning process:

- A list of individual animals to be introduced, including all that the sanctuary ultimately hopes to integrate into a group.
- Background of each individual, including but not limited to: age and gender; social experience with other prosimians; rearing history (hand-reared, parent reared, time spent with mother and siblings); dominance rank in previous groups and rank relative to other prosimians who are also being integrated into the new group; affiliations with other individuals who are also being integrated into the new group; considerations for species-specific behavior and biology including potential for infanticide, cycle status of females, male-male relationships.
    - Auditory and olfactory contact is provided for eulemur species prior to initiating visual contact.
    - Male nocturnal prosimians are introduced into the female's territory or on neutral ground to increase the chance of a successful introduction.
    - Enough space is provided for fission to occur during the introduction process to reduce the level of aggression while hierarchies are being established in new groups.

c. As appropriate or needed, benchmarks or desired outcomes are identified for each step in the process. Examples include:

- physical location of animals during auditory and olfactory contact, if this precedes visual contact;
- physical location of animals during visual contact period;
- behavioral goals of visual contact period;
- physical location of animals during tactile contact period;
- behavioral goals of tactile contact period;
- benchmarks for proceeding to physical introduction;
- space and cages to be used for physical introduction;
- reasons location selected: neutral space, ample run around, visual barriers, doors that can be closed to protect animals in trouble etc.;
- enclosure set-up for physical introduction, enrichment etc.;
- emergency equipment that might be needed;

- time frame necessary to acclimate animals to presence of equipment;
- criteria for separating animals if physical introduction does not proceed safely;
- post introduction management and husbandry protocols.

d. The plan is developed with involvement of all staff involved with care of the species and details a series of steps that will be taken to integrate the individual animals involved. Necessary modifications to enclosures are identified and completed prior to beginning the process.

e. The plan establishes behavioral goals for introductions, is not driven by schedules, and is open to modification as introduction/integration develops and evolves.

f. Only normally scheduled caregivers and animal managers are present to directly observe. Individuals who are not routinely present in the animal area, including veterinary and management staff, observe via remote video or receive reports from staff.

g. All caregivers have a clear understanding of the plan including contingencies for problems that might occur, and are empowered to take appropriate action in the event of perceived emergency.

W-4. Behavioral and Psychological Well-Being

The behavioral/psychological well-being of each prosimian is evaluated and addressed, and a welfare plan and report is part of each prosimian's file.

a. There is a formal, written enrichment program that promotes species-appropriate behavioral opportunities and ensures the captive prosimians' psychological well-being. A complete environmental enrichment program includes the following:

- Structural enrichment - Enclosure design and furniture that add complexity to the environment and promote species-specific behavior (*e.g.*, climbing, perching). Examples include climbing structures, ropes and hammocks.
- Object enrichment – Objects that encourage inspection and manipulation and promote species-specific behavior (*e.g.*, nesting, foraging, tool-use). Examples include grasses, branches and acrylic mirrors.
- Food enrichment - Varying food choices and food presentation, including the use of puzzles that increase food procurement time. Examples include treat dipping and smearing peanut butter in hard-to-reach areas.
- Social enrichment - Affiliative interactions between caregivers and prosimians may be appropriate in some instances. The decision to include social enrichment with caregivers should be made on an individual basis, considering only the social needs of the animal, *e.g.*, prosimians in poorly bonded groups; dependent young; prosimians in small enclosures; solitary animals, particularly those hand reared by humans with no conspecific contact; neonatal and juvenile animals in situations where appropriate.

b. All prosimian care staff are trained to recognize abnormal behavior and clinical signs of illness. Measures of well-being that are assessed include:

- species appropriate behavior and interaction with other animals;

- the animal's ability to respond appropriately to variable environmental conditions, physiological states, developmental stages, and social situations as well as adverse stimuli.

c. Stereotypic behavior, self-injurious behavior, and inappropriate responses to various stimuli not previously documented or witnessed may be evidence of compromised well-being and are investigated. A plan to address the concerns is developed.

d. Where possible and appropriate, a behavioral/psychological profile is maintained for each individual prosimian and updated annually. A copy of this profile is kept in the prosimian's permanent file.

W-5. Prosimian-Caregiver Relationships

Positive relationships between prosimians and caregivers are maintained. Prosimians are not fearful or aggressive in response to human presence or routine care procedures.

a. Prosimians arrive at sanctuaries with a variety of previous experience with caregivers, which caregivers take into account in their interactions with these species.

b. A protocol for introducing prosimians to new caregiver staff has been developed. Where possible, new caregivers accompany a trusted caregiver until the prosimians become comfortable with the new individual.

c. A positive relationship between the prosimians and regular caregivers, animal managers and veterinary staff is one in which the prosimians are given the freedom to integrate with their conspecific social group with minimal human interference or to interact regularly with caregivers if they choose.

d. Where possible and appropriate, animals become familiar with the veterinary staff, allowing close observation. Individual prosimian preference for interaction with caregivers, animal managers and veterinary staff is taken into account.

e. The animals do not become fearful or overly aggressive in response to human presence or routine care procedures.

f. Interactions with prosimians do not cause overheating, excessive cooling, physical harm, or unnecessary discomfort, and minimizes physical and psychological stress or trauma as much as possible.

g. Negative interactions are avoided. However, when they occur, efforts are made to recover trust and a positive relationship, if the prosimian enjoys regular interaction with people.

h. Physical abuse, deprivation of food or water, aversive spraying with a hose, and other forms of negative reinforcement or punishment-based training are never used to train, shift or otherwise handle prosimians.

W-6. Handling and Restraint

Any necessary handling and restraint is done safely and appropriately, with minimal distress to prosimians, and staff are trained in prosimian-specific safe handling techniques/practices.

a. Handling for veterinary care is done as expeditiously and carefully as possible in a manner that does not cause trauma, overheating, excessive cooling, physical harm, or unnecessary discomfort, and minimizes physical and psychological stress as much as possible.

b. Manual capture poses risk of injury to the prosimian and the handler. It is, therefore, used with caution.

- Most prosimians are not aggressive toward humans but strenuously resist physical restraint. Handlers are aware that sifakas kick to escape, aye-aye and slow lorises bite, and slow lorises produce a toxin from a mixture of glandular secretion and saliva.
- When circumstances require capture of a prosimian using a net, the following considerations are taken into account:
  - Capture of prosimians while they are asleep in nest boxes reduces the risk of injury and stress from being chased and is, therefore, recommended. If it is not possible to capture the prosimian while sleeping in a nest box, the animal is allowed to establish a pattern of movement and the net is placed in its path, rather than the animal being chased by handlers.
  - If a prosimian is not safely netted within 2-4 minutes, the attempt is aborted and the animal is allowed ample time to recover, usually two or more hours.
  - The net mesh is large enough to ensure adequate airflow while the animal is captured or restrained.
  - The net width exceeds the arm span of the prosimian to be netted.
  - The net depth is twice the height (head to rump) of the prosimian to be netted.
  - The net fabric is dry, soft and has a flexible suspension to reduce risk of injury to the prosimian.
  - The net handle is short enough to allow maneuverability within the enclosure.
  - The net is not twisted around the prosimian to restrain it as this results in a serious risk of injury or death.
  - Three people - the net handler, an observer, and a person responsible for the human access door - participate in each net capture.
  - Nets are sanitized following each use.

c. Where possible and appropriate, prosimians are conditioned to enter a squeeze cage or crate when restraint is required. Attachments for crates and squeeze cages are included in facility design or incorporated when modifications to the facility are made.

d. Where possible and appropriate, Positive Reinforcement Training is used to minimize the need for chemical immobilization and to reduce stress during procedures.

- With appropriate training, many procedures can be performed cooperatively and without anesthesia, such as examination of body parts, treatment of superficial injury, heart rate monitoring – even EKGs and blood draws.
- Some prosimians may be trained to accept a manual injection for chemical immobilization, thus avoiding the stress of darting.

e. A written policy for the humane chemical restraint and safe capture of animals housed at the sanctuary is in place, to include:

- Training and certification in the equipment, humane chemical restraint, immobilization process, and the use of drugs for veterinarian purposes or emergencies;
- Procedures listing at a minimum those persons authorized to administer animal drugs, situations in which they are to be utilized, location of animal drugs in a safe and secure place, and those persons with access to them, and an emergency procedure in the event of accidental human exposure.

f. All chemical restraint equipment is cleaned after each use, maintained in good working order and tested on a regular basis.

g. Chemical immobilization is performed only by a licensed veterinarian or by trained staff under the guidance of a licensed veterinarian, or other qualified individuals authorized by the sanctuary director or veterinarian, following the laws and regulations of country where the animals are housed. Specific anesthetic protocols, including record-keeping, are followed.

h. Chemical restraint is not used when multiple animals are in an enclosure except in an emergency situation. In such cases, all possible precautions are taken to prevent threats to the handlers and the animal being sedated.

i. Multiple staff members are trained to use a dart gun and other restraint equipment, and to employ safe capture techniques. The staff, and volunteers where appropriate, are aware of who is trained and authorized to use restraint equipment.

j. As part of their training, staff members are instructed to report any medical conditions or physical limitations that may hinder their ability to employ safe capture techniques.

W-7. Animal Transport

Prosimians are appropriately transported to maximize safety and minimize stress and in accordance with all local, state/province, national, international requirements and laws.

General

a. Prosimians are transported only when necessary, such as when being transported to the sanctuary, to a medical facility for care, or to another accredited Sanctuary for reasons as described in acquisition standards.

b. Pre-transport health examinations ideally include a complete physical exam with attention to parasite checks, necessary vaccinations, and completion of any tests required by regulations of the receiving state/province or country.

c. Health certificates and any required transport permits accompany the prosimians when being transported interstate or internationally. All transport abides by local, state/province, national and international law. A veterinarian is responsible for preparing and signing the health certificate.

d. Prior to transport, the sanctuary ensures that adequate facilities are available at the receiving end and food items that are familiar to the animal are available.

e. Where possible and appropriate, prosimians are acclimated to shipping containers/crates prior to transport. Capture, restraint, and transportation methods consider the prosimian's temperament and behavior in order to minimize injury, and distress.

f. At a minimum, transport enclosures meet appropriate animal welfare standards (*e.g.*, IATA, US Animal Welfare Act Transportation Standards or similar).

g. Transport crates and vehicles are in good condition and meet national and/or international standards. Equipment suitable for lifting, crating and transportation of animals kept within the sanctuary is readily available.

h. Transport containers:

- have impervious surfaces, which are cleaned and disinfected after use.
- are designed to permit safe transfer into a secondary enclosure.
- are designed to minimize the risk of prosimians reaching through to make contact with personnel.
- are designed to minimize loss of bedding and waste, reducing the risk of disease transmission.
- are placed within a secondary container or closed compartment on the transport vehicle.

i. Any prosimian taken outside the sanctuary, for an approved reason such as medical treatment or transfer to a more appropriate sanctuary, is in the personal possession of the sanctuary director, or of competent persons acting on his/her behalf and adequate provision is made for the safety and well-being of the animal and public safety.

j. All prosimians taken outside the sanctuary are kept securely at all times. Prosimians are managed outside the sanctuary in such a way that the animal is under control and not likely to suffer distress, cause injury, or transmit or contract disease.

PROSIMIANS BEING RELEASED TO THE WILD

GFAS strongly supports the efforts of wildlife rehabilitators and sanctuary managers to return wildlife to its natural environment, provided appropriate steps are taken to ensure that the animals released are likely to survive in the wild.

Facilities releasing prosimians to the wild must also make every effort to reduce risk of their having a damaging impact on ecological resources, including other animal species, found naturally in the release area. Examples of risk factors include but are not limited to:

- Displacement of indigenous animals;

- Transmission of novel pathogens;
- Disruption of local human communities, including crop raiding, damage to dwellings and injury to local inhabitants;
- Alterations to the environment that disrupt the ecological niche of other species.

For a more detailed discussion of the potential risks, as well as time and financial commitment involved in creating a quality re-introduction project, *see* the International Union for the Conservation of Nature Species Survival Commission (IUCN/SSC) Reintroduction Specialist Group's "Guidelines for Nonhuman Primate Re-Introductions".

R-1. General Considerations

The sanctuary has policies, agreements and plans in place to optimize the chances for successful re-introduction of prosimians into the natural environment.

a. The facility has a written policy regarding the handling of any potential problems involving released animals. The policy should include but is not limited to:
   - a plan to minimize the risk to human life and property in the area of release;
   - a plan for compensation for or mitigation of damages incurred by the released animals;
   - a deterrent plan to discourage inappropriate activities, *i.e*., spending time around human habitation or crop raiding.
   - a plan for management or removal of animals who fail to integrate appropriately or who become habitual 'problem animals.'

b. In as much as possible, using the latest available information on potential health concerns regarding other species found in the area of release, animals are tested and treated for pathogens that might pose a threat to other wildlife.

c. The facility has agreements in place with any and all appropriate authorities to allow the release process to proceed as smoothly as possible.

d. Ideally, permissions, any necessary documentation, site determination, etc. begin as soon as it is determined that there are animals in care that are likely to be suitable for release.
   - In particular, facilities obtain any permits or other forms of authorization needed to proceed with the release.
   - Potential release sites are identified and evaluated as early in this process as possible.

e. Cooperative agreements are in place prior to animals being released which may include, but are not limited to:
   - veterinary and scientific involvement in post-release monitoring;
   - community acceptance of the project and involvement in habitat protection and awareness raising;

- landowner agreements enabling release, including the addressing of specific permissions and permits;
- involvement of NGOs with similar or conflicting interests that may impact (positively or negatively) the project.

R-2. Rescue Of Prosimians

The sanctuary has developed guidelines for rescue work, taking into account staff and animal safety, contingencies for caring for the animal once rescued, and any local, state or national regulations or agency cooperation required.

a. Facilities accepting prosimians from the illegal trade have policies and procedures (ideally in writing) in place with the appropriate authorities that allow for rapid transfer of the animals to the sanctuary or rescue center. These policies and procedures are designed to reduce the risk of:
   - disease transmission;
   - habituation;
   - Inappropriate or inhumane treatment, due to lack of knowledge, by personnel involved in seizure of wildlife from the illegal trade.

b. In as much as possible, while respecting local or national cultural/religious tenets, a euthanasia policy is in place to address situations where the animal's prognosis for survival is too low to warrant attempting treatment.
   - In situations where field euthanasia is being considered, where possible and appropriate (*e.g.*, the animal is reasonably safe from further human interference and the stress of capture would outweigh the benefit of humane euthanasia), the option of leaving the animal *in situ* may be considered.
   - See also Standard V-9, "Euthanasia."

R-3. Evaluation Of Suitability For Release

Prosimians admitted into sanctuary are evaluated for their potential suitability for release.

a. The sanctuary has a protocol in place (ideally in writing) to evaluate potential release candidates and to determine which prosimians are given priority for potential release.
   - Animals who have spent little time in captivity and/or who have had little human contact are given priority for potential release.

- Animals found to be free of diseases and/or parasites of potential concern to the health of the population, particularly in the intended release area, are given priority for potential release.

b. All prosimians are treated as potential release candidates, particularly those who have not been kept long term as pets. If prosimians admitted into sanctuary are determined to be potential release candidates, every effort is made to protect them from exposure to human disease and to keep them as wild as possible.

R-4. Quarantine And Prerelease Housing

(See also Standards H-1 to H-9, "Prosimian Housing," and V-5, "Quarantine and Isolation of Prosimians")

The sanctuary has appropriate quarantine facilities and prerelease housing for prosimians, with consideration given to sick and injured prosimians.

General

a. Non-quarantine housing for prosimians being considered for release provides as close to natural a setting as possible. The space allows for foraging, climbing, nesting and other actions naturally performed in the wild.

b. Quarantine facilities and prerelease housing for prosimians intended for release are situated a minimum of 66 ft. (20m), giving consideration to factors such as wind direction, from resident prosimian populations to protect them from exposure to pathogens present in the sanctuary population that could compromise their return to the wild. A wall surrounding the quarantine area reduces pathogen transfer risk and aids in restricting access to authorized personnel.

- Where this is not possible, sanctuary residents are screened for potential pathogens of concern, and pathogen-free animals are housed closest to the animals intended for release to the wild.

- Sanctuary animals being used as surrogates are screened for pathogens prior to introduction to any dependent prosimians.

c. Where possible and appropriate, sanctuaries follow International Wildlife Rehabilitation Council guidelines (http://www.nwrawildlife.org/content/minimum-standards) in dividing housing into three types:

- Restricted activity/mobility – for the initial stages of rehabilitation where the illness or injury requires the animal be treated and/or prevented from activities that would slow the rehabilitation process. At a minimum, the animal is able to maintain normal upright/alert posture and to stretch the body.

- Limited activity/mobility – for the recovery stage of rehabilitation where the animal is regaining mobility and building strength, and staff does not need access to the animal on a daily basis. The animal is able to move short distances and perform some climbing and perching activities.

- Unlimited/Prerelease – the final stages of rehabilitation where the main concern is ensuring that the animal is fit for release. In this phase, the enclosure provides the

prosimians with opportunities to demonstrate the skills necessary for survival in the wild.

Quarantine Housing

d. Sick or injured wildlife is quarantined in such a way that the rehabilitation process is begun during the quarantine phase.

e. Quarantine facilities have appropriate housing for the treatment of injured or ill prosimians.

f. Quarantine facilities are designed to allow for monitoring and, as needed, modification of behavior of prosimians intended for release.

g. Healthy prosimians admitted to quarantine have as large an enclosure as possible to help maintain natural locomotion and foraging behaviors.

h. Upon arrival, prosimians are quarantined for an adequate number of days, ideally for a minimum of 90 days in accordance with IUCN guidelines. In some situations a longer quarantine may be advisable.

i. The attending veterinarian works closely with regional, national and international experts and authorities to determine appropriate quarantine timing based on health risks to which the newly admitted prosimians may have been exposed.

j. Orphaned prosimians, particularly those who have been kept as pets and potentially exposed to human pathogens, are isolated until any potential health risks are evaluated.

Initial Housing for Orphaned, Ill or Injured Prosimians

k. Animals admitted requiring treatment for illness or injury are housed in enclosures that allow for ease of care. These initial care enclosures can be smaller than that which is acceptable for long-term care.

- Dependent on illness or injury, either Restricted or Limited activity/mobility housing may be utilized.

l. Enclosures provide visual and acoustic barriers to minimize stress.

m. Orphaned prosimians are housed in nursery units, preferably with conspecifics, as species appropriate.

- Where possible, safe, and appropriate, adult prosimians are utilized as surrogates to care for the orphans, thus reducing human contact. Where this is not possible, human caregivers act in a manner that replicates the behaviors of adult, wild prosimians as much as possible.

Intermediate Housing for Orphaned Prosimians

n. As soon as the orphaned prosimians have reached the stage of spending more time away from primary caregivers, they are moved to intermediate housing, where human contact is decreased and interaction with conspecifics is increased. Where possible, the animals are moved to the release site and cared for in a soft release enclosure.

o. Animals are provided with adequate opportunity for climbing, nest building and foraging.

p. In as much as possible, conspecifics are used to teach natural behaviors. Where appropriate releasable conspecifics are not available, and where possible, safe, and appropriate, resident animals with strong natural skills who do not present a disease risk to the wild population, may be used to teach these behaviors.

q. Intermediate housing is isolated from resident animal areas, ideally within a natural habitat which allows the orphans to adjust to a more wild environment.

Intermediate and Prerelease Housing for Sick or Injured Prosimians
Note: *Adult and independent subadult animals, dependent on their admitting condition, may not require intermediate housing.*

r. Animals suffering from injuries that may affect their suitability for release are moved to intermediate housing while regaining strength. Animals are regularly evaluated to determine whether they are likely to be releasable. Once the prosimians are deemed fit, they are moved to prerelease housing.

s. Independent animals brought in for rehabilitation who can be released back into the environment from which they came are returned as soon as it is determined that the animal has recovered sufficiently to resume its presence in its former area.

- Consideration is given to social and territorial issues that may affect safe return to the original habitat.

t. Prerelease housing for adult and independent subadult animals is ideally situated at the intended release site, allowing the animals to acclimate to their new environment before release.

u. In both intermediate and prerelease housing, sufficient vertical as well as horizontal space is provided to allow the prosimians to develop strength and display normal wild behaviors.

R-5. Diet, Nutrition And Foraging Skills

Prosimians are fed an appropriate diet that approximates that which will be found in the habitat to which they are released, and foraging behavior is encouraged.

a. As early in the rehabilitation process as possible, prosimians are exposed to the types of foods found naturally within the environment where they will be released and assessed for their ability to find appropriate foods and avoid inedible or poisonous foods.

b. Release candidates are fed in such a way as to encourage natural foraging behaviors.

c. Rescued prosimians admitted in poor physical condition may require specialized diets to recover their health. Nutritional deficiencies are assessed and diets modified to address those deficiencies. Once the prosimians are back on a normal nutritional plane, any foods not found in their planned release area are no longer fed.

R-6. Husbandry And Health

All aspects of care, including caregiver-prosimian relationships, introduction to social groups and overall health evaluation, are focused on preparing the prosimians for return to the wild.

a. Once a prosimian has been evaluated as a potential release candidate, all aspects of care are focused on preparing the animal for the wild.
   - Human activities and noises are minimized in areas housing prosimians being prepared for reintroduction.
   - Apart from dependent young with no suitable conspecific surrogates, human interaction with prosimians being prepared for release to the wild is restricted to those activities that will enhance the prosimians' ability to live in the wild.

b. The animal is placed in an appropriate social group or paired with a compatible conspecific, depending on species. Where appropriate surrogate conspecifics are not available, dependent young may be reared by human caregivers using approved best practices for the species housed.
   - Care is taken to balance the need to nurture these young animals with their need to develop appropriate survival skills as well as intraspecific social behaviors.
   - Animals are integrated into an appropriate social group, ideally comprised of other conspecifics intended for release, as quickly as possible.

c. Introductions follow Standard W-3 "Introduction of Unfamiliar Individuals."

d. Opportunities to explore, climb and learn skills in the natural environment are provided.

e. Prosimians admitted into care from the wild at the stage where they are already independent, with recoverable illness or injury problems, are treated and released as quickly as possible, taking into account the potential for the animal not being accepted back into its previous social group or territory.

f. Caregiver-prosimian relationships for animals intended for release to the wild, while ensuring the animals' psychological well-being is met, focus on:
   - avoiding any types of interaction that may compromise the prosimians' chances for release;
   - encouraging the prosimians to develop appropriate relationships with conspecifics for their social needs.

g. Veterinary staff evaluate overall health including:
   - recovery from the initial cause for admission to the facility;
   - pathogen surveillance to ensure the animal does not present a risk to the wild population as a result of exposure during the rehabilitation process.
     - In as much as possible, using the latest available information from the OIE-World Organization for Animal Health ((www.oie.int) and the IUCN's Conservation Breeding Specialist Group (http://www.cbsg.org), animals are monitored for human pathogens not found in the wild population.

h. Prosimians being cared for in sanctuary for later release back to the wild are managed in such a way as to optimize their chances for successful return to the natural environment.

R-7. Health And Safety Of Caregivers Working With Releasable Prosimians

(See also Standard V-8, "Zoonotic Disease Program")

No caregiver begins work with releasable prosimians until routine testing has indicated he or she poses no risk to the prosimians' release to the wild.

a. Caregivers working with prosimians intended for release to the wild are routinely monitored for potential anthroponoses (diseases that have potential to be transmitted to the animals).

b. TB testing, vaccinations and fecal cultures for pathogens may be utilized, as appropriate for the region, to ensure the health of both the prosimians and their caregivers. New caregivers should not have contact with the prosimians for the first two weeks of employment.

c. Provision of adequate nutrition for staff is considered as a possible contribution to the continued well-being of both staff and prosimians.

R-8. Assessment of Health and Skills

Prosimians are fully assessed for health and appropriate skills prior to release.

a. Prosimians who have completed the rehabilitation process and have been successfully integrated into a social group or pair, as is species appropriate, are further evaluated for release, with attention to health and the skills attained.

b. Each animal's skills (*e.g.* foraging, nest building, appropriate interaction or avoidance behaviors in the presence of conspecifics, avoidance of dangers including poisonous foods, venomous snakes or predators) are evaluated.

c. A complete health assessment is performed including:

- Overall fitness as relates to being able to survive in the wild, keep up with a conspecific group, avoid predators, etc.
- Injuries and limitations that originally caused the animal to be brought into care are resolved, either completely, or to the extent that the prosimian has a reasonable chance for long term survival.

d. Prosimians have been tested, and found free of pathogens that have potential to harm the wild population in the planned release area, based on the latest current knowledge.

e. Genetic assessment has been done to ensure that the prosimians being released are of an appropriate subspecies/population/subpopulation for the release site.

f. Prosimians are exposed to post-release monitoring equipment prior to release to allow them to acclimate to its presence.

R-9. Determining Appropriate Release Sites

Release sites are evaluated for health and other threats and for appropriateness for the species.

a. The potential release site is evaluated for the presence of appropriate and adequate food sources.

b. The area is evaluated for potential health concerns.

c. The potential release site is surveyed to ascertain whether any wild prosimians are present, either permanently or seasonally.

d. The area is evaluated to establish carrying capacity for prosimians to be released. This includes taking into consideration others releases that may have already taken place and issues of territoriality. Animals are released in an appropriate habitat where carrying capacity for the species has not been reached.

e. The area is evaluated for instances of potential human-wildlife conflict.

f. IUCN guidelines are, in as much as possible, followed when determining release sites for rehabilitated prosimians.

g. Animals are released away from areas where there is potential for or has been a history of human-animal conflict.

R-10. The Release Process And Post Release Monitoring

Prosimians are supported as needed to adapt in their new environment and are monitored post release.

a. Once it is determined that the prosimians have the basic skills for foraging in their new environment, supplemental care is discontinued.

b. A post-release monitoring program is in place to ensure the rehabilitation program is providing the animals with the skills necessary to survive, that the habitat is adequate and that, as is species appropriate, prosimians have integrated into the wild.

c. Ideally, prosimians are returned to the wild using a soft release process wherein they are housed in an enclosure within the release area or spend time with caregivers in the release area where supplemental food may be provided as needed and observation of their acclimatization may be observed.

d. Post release monitoring, in conjunction with outside veterinary and scientific personnel, continues for a minimum of one year.

- Level of monitoring may decrease over time as prosimians are determined to be acclimating to the environment.
- Longer term monitoring of the animals and their impact on the habitat is preferred.
- Practices used and results obtained, both positive and negative, are shared both within the facility and with others involved in prosimian reintroduction to aid in the continued improvement of the program.