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LIST OF MAMMAL SPECIES KNOWN TO OCCUR IN
MANU BIOSPHERE RESERVE, PERU

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ABSTRACT

We provide a comprehensive list of the mammal species known to occur in the Manu Biosphere Reserve, Peru, from the summit of the eastern Cordillera at Puesto de Vigilancia Acjanaco (3450 m) to Boca Manu (365 m), along an altitudinal transect comprising the Río Alto Madre de Dios drainage; and from Boca Manu to the Cocha Cashu Biological Station (380 m) along the Río Manu. This extensive elevational gradient includes a great diversity of habitats ranging from tropical lowland forests through upper tropical and elfin forests to moist puna grasslands.

The mammal fauna of the Manu Biosphere Reserve comprises 190 species including 17 didelphimorphs, 1 paucituberculate, 7 xenarthrans, 79 bats, 13 primates, 17 carnivores, 1 perissodactyl, 6 artiodactyls, 48 rodents, and 1 rabbit. There is evidence that at least three more species are likely to occur there. A complete list of localities and the elevational range is given for each species. Most identifications are based on voucher specimens deposited in museum collections; a few are from sightings by one of the authors or a member of their respective field teams.

RESUMEN

Presentamos una lista comprensiva de las especies de mamíferos presentes en la Reserva de la Biósfera del Manu, Perú, desde la cumbre de la Cordillera Oriental en el Puesto de Vigilancia Acjanaco (3450 m) hasta Boca Manu (365 m), a lo largo de un transecto altitudinal que abarca la cuenca del Río Alto Madre de Dios; y desde Boca Manu hasta la Estación Biológica Cocha Cashu (380 m) a lo largo del Río Manu. Este extenso gradiente de elevación incluye una gran diversidad de hábitats desde bosques bajos tropicales, continuando por selva alta y bosques enanos hasta pajonales de puna húmeda.

La fauna de mamíferos de la Reserva de Biósfera del Manu comprende 190 especies, que incluyen 17 didelfimorfos, 1 paucituberculado, 7 xenartros, 79 murciélagos, 13 primates, 17 carnívoros, 1 tapir, 6 artiodáctilos, 48 roedores y 1 conejo. Hay evidencia de que al menos tres especies adicionales probablemente ocurrían allí. Una lista completa de localidades y de rangos elevacionales son dadas para cada especie. La mayoría de las identificaciones está basada en especímenes depositados en colecciones de museo; unas pocas provienen de avistamientos por uno de los autores o un miembro de sus respectivos equipos de campo.

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- *— for areas other than CC, sight or sound records lacking vouchers
- ?— preliminary identifications of vouchers in need of further substantiation.

Taxonomic notes

- 1— Ordinal classification of marsupials follows Marshall *et al.* (1990).
- 2— subdivision of "Marmosa" (mouse opossums) into several distinct genera follows Gardner and Creighton (1989).
- 3— following Gardner's (1993) treatment of "Marmosa cinerea".
- 4— replaces *Phylloderma stenops* (see Baker *et al.*, 1988).
- 5— "sylvicola" rather than "silvicola" is the correct spelling of this name for reasons given in Patterson (1992).
- 6— following Griffiths (1982) and Koopman (1993).
- 7— species being described by Pacheco (in press).
- 8— replaces *Artibeus fuliginosus* (see Handley, 1989).
- 9— possibly conspecific with *Artibeus jamaicensis* (cf. Koopman, 1982; Handley, 1989).
- 10— species inadvertently omitted in Koopman (1993).
- 11— may include *M. bondae* at HA.
- 12— replaces *Aotus trivirgatus* (see Hershkovitz, 1983).
- 13— replaces *Callicebus moloch* (see Hershkovitz, 1990).
- 14— replaces *Pithecia monachus* (see Hershkovitz, 1987).
- 15— replaces *Saimiri sciureus* (see Hershkovitz, 1984).
- 16— generic classification of cats follows Wozencraft (1993).
- 17— generic classification of peccaries follows Grubb (1993)
- 18— following nomenclature in Myers *et al.* (1990) and Patton *et al.* (1990).
- 19— clearly an undescribed species (JLP).
- 20— following Carleton M.D.(personal communication).
- 21— replaces *O. concolor* in Terborgh *et al.* (1984).
- 22— replaces *O. longicaudatus* in Terborgh *et al.* (1984).
- 23— listed in Carleton and Musser (1989:72) as "*Oligoryzomys* sp. B," a member of the *flavescens* group.
- 24— based on sight record and photograph at CC by LHE and a specimen from the Rio Colorado, zona boca (FMNH).
- 25— species being described by Maria Nazareth F. da Silva.

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<i>Neacomys spinosus</i>	HE, Pk, VC	350-600 m
<i>Neacomys</i> sp. ¹⁹	SP	1500 m
<i>Nectomys squamipes</i>	CC, HA, Pk, SP, VC	350-1500 m
<i>Neusticomys peruviensis</i>	Pk	350 m
<i>Oecomys bicolor</i>	AI, CC, HA, Pk	350-500 m
<i>Oecomys phaeotis</i> ²⁰	BN, VC	600-1700 m
<i>Oecomys superans</i> ²¹	CC, HE, Pk	350-500 m
<i>Oligoryzomys microtis</i> ²²	CC, HA, M, P, Pk, Sh, VC	350-600 m
<i>Oligoryzomys</i> sp. ²³	AA, CM, LE, Pi, TC	2450-3450 m
<i>Oryzomys capito</i>	AI, CC, HA, HE, It, M, Pk RP, VC	350-600 m
<i>Oryzomys keaysi</i>	BN, ML, Qc, SP	1180-2250 m
<i>Oryzomys levipes</i>	AA, BN, ML	1700-3200 m
<i>Oryzomys macconnelli</i>	CC	380 m
<i>Oryzomys nitidus</i>	CC, CP, HA, Pk, RP	350-1030 m
<i>Oxymycterus paramensis</i>	CM	3450 m
<i>Oxymycterus</i> sp.	CC, Co, P, VC	380-1000 m
<i>Phyllotis osilae</i>	CM	3450 m
<i>Rhipidomys couesi</i>	CC, Pk	350-380 m
<i>Thomasomys aureus</i>	AA, LE, ML, Pi, SP, TE	1500-3350 m
<i>Thomasomys daphne</i>	AA, TE	3200-3350 m
<i>Thomasomys gracilis</i>	TC	3400 m
<i>Thomasomys notatus</i>	SP	1500 m
<i>Thomasomys oreas</i>	AA, LE, TC, TE	2850-3400 m
Erethizontidae		
<i>Coendou bicolor</i>	CC	380 m
Caviidae		
<i>Cavia tschudii</i>	CM	3450 m
Dinomyidae		
<i>Dinomys branickii</i>	CC	380 m
Hydrochaeridae		
<i>Hydrochaeris hydrochaeris</i>	AI, CC, Pk	350-400 m
Agoutidae		
<i>Agouti paca</i>	CC, Pk	350-380 m
<i>Agouti taczanowskii</i>	TE	3350 m
Dasyprictidae		
<i>Dasyprocta variegata</i>	AI, CC, *Pk	350-400 m
<i>Myoprocta pratti</i>	AI, CC, *Pk	350-400 m
Echimyidae		
<i>Dactylomys dactylinus</i>	CC, *Pk, T	350-815 m
<i>Echimys cf. occasius</i> ²⁴	CC	380 m
<i>Mesomys hispidus</i>	CC, Pk	350-380 m
<i>Proechimys brevicauda</i>	CC, Pk	350-380 m
<i>Proechimys simonsi</i>	AC, CC, HE, It, Pk, Qc, VC	350-1180 m
<i>Proechimys steerei</i>	CC, It, Pk	350-450 m
<i>Proechimys</i> sp. nov ²⁵	Pk	350 m
LAGOMORPHA		1 sp.
Leporidae		
<i>Sylvilagus brasiliensis</i>	CC, P, Pk, VC	350-60 0m

<i>Lagothrix lagotricha</i>	CC, CS, *ML, Pn, *SP	380-2200 m
<i>Pithecia irrorata</i> ¹⁴	AI, CC	380-400 m
<i>Saimiri boliviensis</i> ¹⁵	AI, CC, It, *Pk	350-450 m
 CARNIVORA		17 spp.
Canidae		
<i>Atelocynus microtis</i>	AI, CC	380-400 m
<i>Pseudalopex culpaeus</i>	*CM	3450 m
Ursidae		
<i>Tremarctos ornatus</i>	*BN, *CM, *ML	1700-3450 m
Procyonidae		
<i>Bassaricyon gabbii</i>	CC	380 m
<i>Nasua nasua</i>	AI, CC, *Pk	350-400 m
<i>Potos flavus</i>	CC, It	380-450 m
<i>Procyon cancrivorus</i>	CC	380 m
Mustelidae		
<i>Conepatus chinga</i>	CM	3450 m
<i>Eira barbara</i>	CC, *Pk	350-380 m
<i>Galictis vittata</i>	CC	380 m
<i>Lutra longicaudis</i>	AI, CC, *Pk	350-400 m
<i>Mustela frenata</i>	TE	3350 m
<i>Pteronura brasiliensis</i>	AI, CC, *Pk	350-400 m
Felidae ¹⁶		
<i>Herpailurus yagouaroundi</i>	CC, *ML, *Pk	350-2250 m
<i>Leopardus pardalis</i>	*AC, AI, CC, *HE, M, *Pk	350-500 m
<i>Panthera onca</i>	CC, Cñ, *HE, *Pk	350-1000 m
<i>Puma concolor</i>	CC, CM, *Pk	350-3450 m
 PERISSODACTYLA		1 sp.
Tapiridae		
<i>Tapirus terrestris</i>	CC, *Pk	350-380 m
 ARTIODACTYLA		6 spp.
Tayassuidae ¹⁷		
<i>Pecari tajacu</i>	CC, *Pk	350-380 m
<i>Tayassu pecari</i>	CC, *Pk	350-380 m
Cervidae		
<i>Mazama americana</i>	CC, *Pk	350-380 m
<i>Mazama chunyi</i>	*TE	3350 m
<i>Mazama gouazoubira</i>	CC	380 m
<i>Odocoileus virginianus</i>	*CM	3450 m
 RODENTIA		48 spp.
Sciuridae		
<i>Microsciurus flaviventer</i>	AI, Co, CP, HA, It	400-1000 m
<i>Sciurus ignitus</i>	AI, CC, *Pk, VC	350-600 m
<i>Sciurus igniventris</i>	HA, VC	600-850 m
<i>Sciurus sanborni</i>	AI, M	365-400 m
<i>Sciurus spadiceus</i>	CC, *Pk	350-380 m
Muridae		
<i>Akodon aerosus</i>	BN, ML, SP	1500-2250 m
<i>Akodon subfuscus</i> ¹⁸	AA, CM, TC	3200-3450 m
<i>Akodon torques</i>	AA, CM, LE, ML, Pi, TC, TE	2100-3450 m
<i>Holochilus brasiliensis</i>	M	365 m
<i>Microryzomys minutus</i>	AA, LE, Pi, TC, TE	2450-3400 m

<i>Dermanura gnoma</i>	Pk	350 m
<i>Enchisthenes hartii</i>	AC, BN, Co, CP, HA, Qc, T	450-1700 m
<i>Mesophylla macconnelli</i>	AI, CC, Co, HA, Pk, T	350-1380 m
<i>Platyrrhinus brachycephalus</i>	AC, CC, HA, HE, Pk, RP, T	350-900 m
<i>Platyrrhinus dorsalis</i>	Co, CP, HA, HE, Qc, SP, T, TE	500-3350 m
<i>Platyrrhinus helleri</i>	AC, Co, HA, HE, Pk, RP, T	350-1250 m
<i>Platyrrhinus infuscus</i>	Co, CP, HA, HE, It, Pk, RP, T	350-1400 m
<i>Platyrrhinus lineatus</i>	AC, BN, Co, HA, Qc, RP, SP, T	450-1700 m
<i>Sphaeronycteris toxophyllum</i>	CC	380 m
<i>Sturnira erythromos</i>	AA, BN, HA, ML, Pi, SP, TE	1050-3350 m
<i>Sturnira lilium</i>	AC, Co, HA, HE, Pk, Qc, RP, SP, T	350-1450 m
<i>Sturnira magna</i>	AC, Co, CP, HA, HE, SP, T	450-1500 m
<i>Sturnira oporaphilum</i> ¹⁰	BN, Co, CP, HA, SP, T	500-1700 m
<i>Sturnira tildae</i>	HA, Pk	350-780 m
<i>Uroderma bilobatum</i>	AC, CC, CP, HA, HE, Pk, RP, T	350-1050 m
<i>Uroderma magnirostrum</i>	CC, Pk	350-380 m
<i>Vampyressa bidens</i>	CP, CS, HA, Pk, T	350-1050 m
<i>Vampyressa melissa</i>	BN, Qc, SP	1180-1700 m
<i>Vampyressa nymphaea</i>	Pk	350 m
<i>Vampyressa pusilla</i>	CC, HA, Pk, T	350-950 m
<i>Vampyrodes caraccioli</i>	AC, Co, CP, HA, Pk	350-1200 m
Desmodontinae		
<i>Desmodus rotundus</i>	HA, HE	500-680 m
<i>Diphylla ecaudata</i>	CP, HE, Pk	350-1000 m
Furipteridae		
<i>Furipterus horrens</i>	HA, Pk, T	350-900 m
Thyropteridae		
<i>Thyroptera tricolor</i>	CC, HA, Pk	350-680 m
Vespertilionidae		
<i>Eptesicus brasiliensis</i>	Pi, T	900-2510 m
<i>Eptesicus furinalis</i>	ML	2250 m
<i>Lasiurus ega</i>	Pk	350 m
<i>Myotis albescens</i>	HE, Pk	350-500 m
<i>Myotis keaysi</i>	HA, Pi, TE	500-3350 m
<i>Myotis nigricans</i>	CC, HA, HE, Pk, Sh, T, VC	350-1050 m
<i>Myotis cf. riparius</i>	Co, HA, Pk	350-1380 m
<i>Myotis simus</i>	Pk	350 m
Molossidae		
<i>Molossus molossus</i> ¹¹	HA, HE, Pk, Sh, T	350-950 m
<i>Nyctinomops laticaudatus</i>	Pk	350 m
PRIMATES		13 spp.
Callitrichidae		
<i>Cebuella pygmaea</i>	CC	380 m
<i>Saguinus fuscicollis</i>	CC, It, *Pk	350-450 m
<i>Saguinus imperator</i>	CC, It, *Pk	350-450 m
Callimiconidae		
<i>Callimico goeldii</i>	AI, CC	380-400 m
Cebidae		
<i>Alouatta seniculus</i>	CC, It, *Pk	350-450 m
<i>Aotus nigriceps</i> ¹²	AI, CC, HE, *Pk, VC	350-600 m
<i>Ateles paniscus</i>	CC, It, *Pk	350-450 m
<i>Callicebus brunneus</i> ¹³	AI, CC, It, *Pk	350-450 m
<i>Cebus albifrons</i>	AI, CC, *Pk	350-400 m
<i>Cebus apella</i>	AI, CC, It, *Pk	350-450 m

CHILOPTERA		79 spp.
Emballonuridae		
<i>Cormura brevirostris</i>	HA	680 m
<i>Peropteryx kappleri</i>	VC	600 m
<i>Rhynchoycteris naso</i>	CC, Pk	350-380 m
<i>Saccopteryx bilineata</i>	P, Pk	350-550 m
<i>Saccopteryx leptura</i>	CC	380 m
Noctilionidae		
<i>Noctilio albiventris</i>	CC, Pk	350-380 m
<i>Noctilio leporinus</i>	Pk	350 m
Phyllostomidae		
Phyllostominae		
<i>Chrotopterus auritus</i>	CC, HA	380-520 m
<i>Macrophyllum macrophyllum</i>	Pk	350 m
<i>Micronycteris hirsuta</i>	RP	490 m
<i>Micronycteris megalotis</i>	HA, Pk, RP	350-825 m
<i>Micronycteris minuta</i>	Pk	350 m
<i>Micronycteris cf. schmidtorum</i>	HA, RP	490-680 m
<i>Mimon crenulatum</i>	Co, HA, Pk	350-1400 m
<i>Phyllotomus elongatus</i>	AC, CC, CS, HA, HE, M, Pk, Qc, T	350-1180 m
<i>Phyllotomus hastatus</i>	AC, BV, CC, HA, HE, It, Pk, RP	350-500 m
<i>Phyllotomus stenops</i> ⁴	CC, Co, Pk	350-1200 m
<i>Tonatia bidens</i>	CC, CP, HA, Pk	350-1030 m
<i>Tonatia brasiliense</i>	Pk, ?RP	350-490 m
<i>Tonatia sylvicola</i> ⁵	CP, HA, HE, It, Pk, RM	350-1000 m
<i>Trachops cirrhosus</i>	AC, CC, CP, CS, HE, M, Pk	350-1000 m
<i>Vampyrum spectrum</i>	CC, HA	380-820 m
Lonchophyllinae ⁶		
<i>Lionycteris spurrelli</i>	CP, HA	820-1100 m
<i>Lonchophylla thomasi</i>	AC, CC, Co, HA, HE, P, Pk, RP	350-1350 m
Glossophaginae		
<i>Anoura caudifera</i>	Co, HA, Pk, SP, T	350-1500 m
<i>Anoura cultrata</i>	CP	980-1030 m
<i>Anoura geoffroyi</i>	Co, CP, HA, Pi, T, TE	780-3350 m
<i>Anoura</i> sp. nov. ⁷	TE	3350 m
<i>Choeroniscus minor</i>	CC, HA, Pk	350-825 m
<i>Glossophaga commissarisi</i>	Pk	350 m
<i>Glossophaga soricina</i>	CC, HA, HE, Pk	350-950 m
Carollinae		
<i>Carollia brevicauda</i>	AC, BN, CC, Co, CP, CS, HA, P, Pk, Qc, RM, RP, SP, T	350-1700 m
<i>Carollia castanea</i>	AC, CC, CS, HA, Pk, RM, RP, Sh, T	350-900 m
<i>Carollia perspicillata</i>	AC, BN, CC, CJ, CP, HA, HE, M, ML, P, Pk, RP, Sh, T	350-2250 m
<i>Rhinophylla pumilio</i>	HA, HE, Pk	350-825 m
Stenodermatiniae		
<i>Artibeus lituratus</i>	AC, CC, HA, HE, Pk, RP, T	350-1030 m
<i>Artibeus obscurus</i> ⁸	AC, CC, CJ, CP, CS, HA, HE, Pk, RP, Sh, T	350-1030 m
<i>Artibeus planirostris</i> ⁹	CC, CS, HA, HE, M, Pk, RP, T	350-1050 m
<i>Chiroderma salvini</i>	Co, HA, T	680-1380 m
<i>Chiroderma trinitatum</i>	HA, Pk, T	350-950 m
<i>Chiroderma villosum</i>	CS, HA, Pk, T	350-900 m
<i>Dermanura anderseni</i>	AC, CP, HA, HE, Pk, RP, Sh	350-1030 m
<i>Dermanura cinerea</i>	Pk	350 m
<i>Dermanura glauca</i>	BN, CC, Co, CP, HA, ML, Pi, Qc, SP, T	380-2500 m

- 26 — Río Pantiacolla (= Río Palotoa), left bank, 12 km upstream from mouth, 490 m (FMNH) (RP)
 27 — Shintuya, 420 m (FMNH) (Sh)
 28 — 72 km by road NE Paucartambo, 1500 m (at km marker 152, just above San Pedro; MVZ, MUSM) (SP)
 29 — Tono, 5 km S Río Tono and 18 rd km W Patria, 800-950 m (FMNH) (T)
 30 — Tres Cruces, 18 km NE Paucartambo, 11,500' [3500 m] (MVZ) (TC)
 31 — Trocha Ericsson, a trail just below P.V. Acjanaco, 3350 m (MUSM) (TE)
 32 — Hacienda Villa Carmen, 600 m (FMNH) (VC).

Table 1. List of 190 species of mammals, including localities and elevational ranges for each species, in the Manu Biosphere Reserve, Peru. Localities are identified by letter codes for convenience and are explained in detail in the text.

Species	Localities	Elevational Range
DIDELPHIMORPHIA¹		17 spp.
Didelphidae		
<i>Caluromys lanatus</i>	CC, VC	380-600 m
<i>Caluromysoops irrupta</i>	CC, It	380-450 m
<i>Chironectes minimus</i>	HE, Sh, VC	420-600 m
<i>Didelphis marsupialis</i>	AI, CC, HE, *Pk	350-500 m
<i>Glironia venusta</i>	CC	380 m
<i>Gracilinanus agilis</i> ²	Pk	350 m
<i>Marmosa andersoni</i>	VC	600 m
<i>Marmosa murina</i>	Pk	350 m
<i>Marmosa rubra</i>	VC	600 m
<i>Marmosops impavidus</i>	SP	1450 m
<i>Marmosops noctivagus</i>	AI, BN, CC, HA, P, Pk, VC	350-1700 m
<i>Marmosops parvidens</i>	HA, Pk	350-500 m
<i>Metachirus nudicaudatus</i>	CC, HE, Pk, RM	350-500 m
<i>Micoureus regina</i> ³	AI, CC, HA, It, Pk	350-1050 m
<i>Monodelphis adusta</i>	HA, SP	825-1450 m
<i>Monodelphis brevicaudata</i>	Pk	350 m
<i>Philander opossum</i>	AC, CC, HE, Pk	350-500 m
PAUCITUBERCULATA		1 sp.
Caenolestidae		
<i>Lestoros inca</i>	AA, LE, ML, Pi, TC, TE	2100-3400 m
XENARTHRA		7 spp.
Bradylopodidae		
<i>Bradypus variegatus</i>	CC	380 m
Megalonychidae		
<i>Choloepus hoffmanni</i>	CC, HA, *Pk	350-500 m
Dasypodidae		
<i>Dasypus novemcinctus</i>	CC, VC	380-600 m
<i>Priodontes maximus</i>	CC	380 m
Myrmecophagidae		
<i>Cyclopes didactylus</i>	CC	380 m
<i>Myrmecophaga tridactyla</i>	CC	380 m
<i>Tamandua tetradactyla</i>	CC, *Pk	350-380 m

(Pacheco *et al.*, in press). The Manu Biosphere Reserve is nearly as diverse as the entire country of Costa Rica (Wilson, 1983). Moreover, the continuing discovery of new species in Peru, and of new species records within the Biosphere Reserve, indicates that current figures may substantially underestimate existing mammalian diversity in both political units. More than 20 other species occurring in nearby river drainages may well be found within the Manu Biosphere Reserve, especially considering that the sampled localities reported here represent an area of less than 10% of the entire Reserve.

Some species are said to occur in the area by Park guards or campesinos, including *Oncifelis colocolo*, a small cat rarely seen in the puna of the higher Manu, and *Pudu mephistophiles*, a small deer said to occur at the edge of the elfin forests near Acjanaco. The Museo de Historia Natural (MUSM) has one pudu skin from Ollaechea in Puno Department, to the south of Manu National Park, supporting the likelihood of the occurrence of this species in the Reserve. *Lagidium peruanum* is also seen in the higher regions around nearby Paucartambo, and may well be present on talus slopes within the Park itself. None of these species is included in the accompanying list.

Manu National Park is well known for its pristine lowland tropical forest, but the eastern versant of the Andes is equally rich and diverse. This versant alone contains some 77 species, most of which do not occur in the lowland tropical forest. However, the Eastern versant forests are the most severely threatened and little has been done to protect them.

LOCALITY RECORD CODES.-

- 1 — 32 km (by road) NE Paucartambo, 3200 m (at km marker 112, below Abra Acjanaco; MVZ) (AA)
- 2 — Aguas Calientes, ca. 1 km below Shintuya on left bank Río Alto Madre de Dios, 450 m (MVZ) (AC)
- 3 — Altamira, 400-450 m (FMNH) (AI)
- 4 — Buenos Aires, at km. marker 132, 2360 m (MUSM) (BA)
- 5 — Albergue Bosque de las Nubes, at Puente Unión, km. marker 150, 1700 m (MUSM) (BN)
- 6 — Puerto Buena Vista, 550 m (FMNH) (BV)
- 7 — Cocha Cashu, 380 m (Terborgh *et al.*, 1984; Janson and Emmons, 1990; Ascorra *et al.*, 1991; Emmons, unpublished) (CC)
- 8 — Cocha Juárez (Ascorra *et al.*, 1991) (CJ)
- 9 — Cerro Macho Cruz, above P.V. Acjanaco, 3450 m (MUSM) (CM)
- 10 — Cosñipata, 1000 m (FMNH) (Cñ)
- 11 — Consuelo, 17 km by road W of Pilcopata, at km marker 165, 1000-1400 m (Stephens and Traylor, 1983; FMNH) (Co)
- 12 — Cerro de Pantacolla, 960-1120 m (Stephens and Traylor, 1983; FMNH) (CP)
- 13 — Cocha Salvador, 500 m (Ascorra *et al.*, 1991; FMNH) (CS)
- 14 — Hacienda Amazonía, 500-1050 m (FMNH); 500-600 m (MUSM) (HA)
- 15 — Hacienda Erika (Ascorra *et al.*, 1991 at 550 m; MVZ at 500 m) (HE)
- 16 — Itahanfa, 400-450 m (FMNH) (It)
- 17 — 39 km by road NE Paucartambo, 2850 m (at km marker 119, just above La Esperanza; MVZ) (LE)
- 18 — Manu, 365 m (FMNH); near Boca Manu (USNM) (M)
- 19 — Quebrada Morro Leguña, 54 km by road NE Paucartambo, 2100-2250 m, at km. marker 134, just below Buenos Aires, (MUSM, equal to Buenos Aires of MVZ) (ML)
- 20 — Approximately 10 km west of Pilcopata, at 550 m (MUSM) (P)
- 21 — Pillahuata, 2450-2880 m (FMNH); 48 km by road NE Paucartambo, 2450 m (at km marker 128, just below Pillahuata; MVZ) (Pi)
- 22 — Pakitzá, 350 m (MUSM; Ascorra *et al.*, 1991) (Pk)
- 23 — Río Panagua, 490 m (FMNH) (Pn)
- 24 — Quebrada Quitacalzón, 1180 m (MUSM) (Qc)
- 25 — Lower Río Manu (FMNH; Ascorra *et al.*, 1991) (RM)

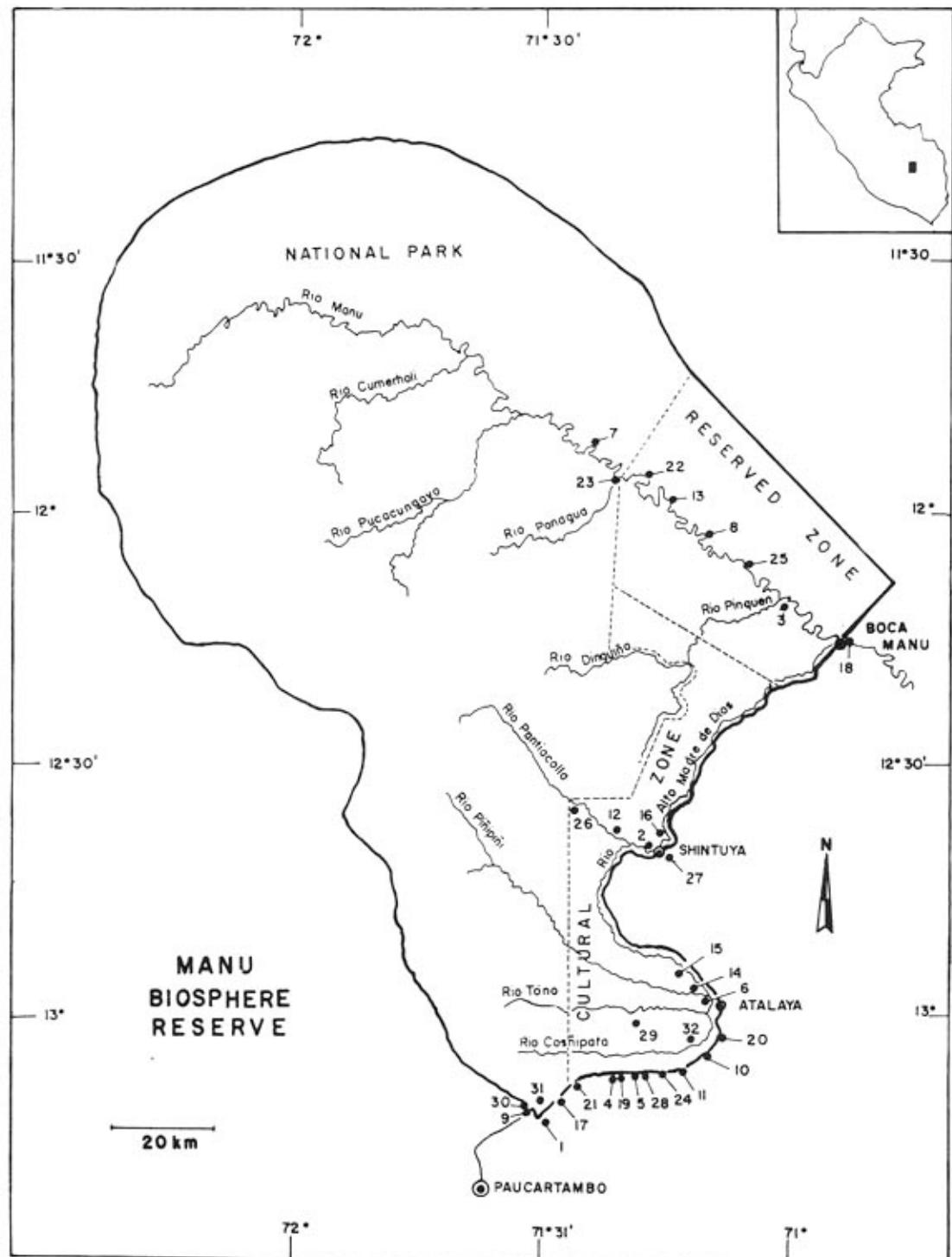


Fig. 1. Map of Manu Biosphere Reserve (area within solid line), showing the 32 locality samples (solid circles) along the Río alto Madre de Dios drainage and along Río Manu. See the text for explanation of numbers.

INTRODUCTION

The Manu Biosphere Reserve, with an area of 18,812 sq km, located in the departments of Cuzco and Madre de Dios, Peru, includes one of the largest protected areas in the world, the Manu National Park, created in 1973, in addition to the Reserved Zone and the Cultural Zone (Fig. 1). The Reserve encompasses a unique range and diversity of habitats, from lowland tropical forests to all stages of montane and upper montane forest and moist puna grassland.

The biotic diversity of the Manu National Park is outstanding, but inventories are just beginning and have been reported only partially. The first published list (that for only the Cocha Cashu Biological Station at 380 m in the lowland forests) was provided for birds and mammals (Terborgh *et al.*, 1984). More recently, the list was amended for non-flying mammals by Janson and Emmons (1990), and for bats of nearby lowland tropical habitats by Ascorra *et al.* (1991).

Here we provide a comprehensive list of the mammal species found to occur in the Manu Biosphere Reserve and surrounding areas, from the summit of the eastern Cordillera at Puesto de Vigilancia Acjanaco (3450 m) to Boca Manu (365 m), along an altitudinal transect comprising the Río Alto Madre de Dios drainage; and from Boca Manu to the Cocha Cashu Biological Station (380 m) along the Río Manu.

STUDY SITES AND METHODS

Mammals have been recorded from 32 localities within or on the borders of the Reserve. Several sites are sufficiently close together that their lists could be pooled to simplify the results. The habitats at Cocha Cashu and Pakitza Biological Stations, have been described in detail elsewhere (Terborgh *et al.*, 1984; Erwin, 1991; Ascorra *et al.*, 1991). None of the other localities, especially those along the elevational gradient below Puesto de Vigilancia Acjanaco, have been described with regard to ecology and plant species composition.

Orders and families follow the classification of mammals provided in Wilson and Reeder (1993). Within families or subfamilies, genera and species are listed in alphabetical order. Taxonomic notes are provided in footnotes of individual entries and are listed in Table 1. English, Spanish and local vernacular names are not given, but are available elsewhere (Macdonald, 1984; Pacheco *et al.*, in press).

Primary information sources are denoted by site in the locality records. Determinations of those specimens housed in each collection repository were made by V. Pacheco (Museo de Historia Natural [MUSM]), B. D. Patterson (Field Museum of Natural History [FMNH]), and J. L. Patton (Museum of Vertebrate Zoology [MVZ]). The original basis for records in Ascorra *et al.* (1991), either those specimens in the Museo de Historia Natural (MUSM) or the National Museum of Natural History (USNM), are cited in that work. Most large-bodied mammals lack vouchers for the study area; cited records are based on positive sight identifications by one of the authors or other member of their respective field teams.

RESULTS AND DISCUSSION

We present a list of 190 species of mammals recorded for the Manu Biosphere Reserve, including 17 didelphimorphs, 1 paucituberculate, 7 xenarthrans, 79 bats, 13 primates, 17 carnivores, 1 tapir, 6 artiodactyls, 48 rodents, and 1 rabbit (Table 1). The thirty two localities sampled are identified by letter codes in Table 1, and by numbers in Fig. 1. Elevational ranges given do not include records from study sites other than those cited here.

The Manu Biosphere Reserve and particularly the Alto Madre de Dios and Manu river drainages are, to our knowledge, one of the biologically best known study areas in western Amazonia. With the data at hand, this area is clearly one of the most unique and extraordinarily rich mammalian fauna in South America. For instance, the 190 species of mammals recorded here represent nearly half of the continental mammal species known for Peru, which is the third most diverse country in the world