

A SURVEY OF LIVING PRIMATES AND THEIR ANATOMY

FRIDERUN ANKEL-SIMONS



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a survey of
LIVING
PRIMATES
and Their
ANATOMY

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and Their
ANATOMY

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*This book is dedicated to
my dear friend Elsa Dubois,
my husband Elwyn,
our children, Cornelia and Verne,
and to the memory of
my brother, Cornelius Ankel*

Preface

Many people give various kinds of help to an author during the preparation of a book. Such aid—both explicit and implicit—deserves the author's thanks.

First of all, I would like to thank my students, whose inquisitive questions have always been an invaluable stimulus that has taught me more than have many teachers.

Furthermore, my gratitude goes to all the colleagues who assisted me in various ways and especially to those who read and contributed their criticism to parts of the book, namely Fredericka Oakley, Matt Cartmill, Bert Covert, Dieter Glaser, Andy Hamilton, David Pilbeam, Montrose Moses, Patricia Poorman, Len Radinsky, and Ian Tattersall. Rich Kay also helped with some library problems. My husband Elwyn Simons, edited the manuscript and added much invaluable knowledge and advice. Ruth Nix was helpful with editorial matters.

I am also very grateful to all those who contributed photographs: Alison Richard, Ken Glander, Dieter Glaser, Christian Schmidt, Michael Stuart, and Heinrich Sprankel.

Lastly, my dear friend Elsa Dubois gave me support in so many ways that a very special word of thanks goes to her.

One final word about the scope of this book seems appropriate here: Because both the primate fossil record and the details of the behavior of living primates have already been covered by Elwyn Simons and Alison Jolly in their respective contributions to the Macmillan Series in Physical Anthropology, no attempt is made here to duplicate any of the information included in their two volumes.

F.A.S.

Taxonomic List of Extant Primates

Intercedents Insectivora—Primates

Infraorder Tupaiiformes

Family Tupaiidae

Subfamily Ptilocercinae

Ptilocercus

(pen tailed tree shrew)

Ptilocercus Iowii

Subfamily Tupiinae

Tupaia

(tree shrews)

Tupaia glis

Tupaia picta

Tupaia carimatae

Tupaia nicobarica

Tupaia javanica

Tupaia minor

Tupaia gracilis

Tana

Tupaia (Tana) tana

Tupaia (tana) dorsalis

Tupaia (Anathana) ellioti

Anathana

Dendrogale

Dendrogale murina

Dendrogale melanura

Urogale

Urogale everetti

Order Primates

Suborder Prosimii

Infraorder Lemuriformes

Superfamily Lemuroidea

Family Lemuridae

Subfamily Lumurinae

Lemur

(lemurs)

Varecia

(variegated lemur)

Hapalemur

(gentle lemur)

Lepilemur

(sportive lemur)

Subfamily Cheirogaleinae

Cheirogaleus

(dwarf lemurs)

Allocebus

(hairy eared dwarf lemur)

*Microcebus**Mirza*

(mouse lemurs)

Phaner

(forked lemur)

Family Indriidae

Subfamily Indriinae

Propithecus

(sifakas)

Indri

(indri)

Avahi

(woolly lemur)

Family Daubentoniidae

Daubentonia

(aye aye)

*Lemur catta**Lemur fulvus**Lemur macaco**Lemur mongoz**Lemur rubriventer**Lemur* or *Varecia variegatus**Hapalemur griseus**Hapalemur simus**Lepilemur mustelinus**Cheirogaleus major**Cheirogaleus medius*(Cheirogaleus) *Allocebus trichotis**Microcebus murinus**Mirza coquereli**Phaner furcifer**Propithecus diadema**Propithecus verreauxi**Indri indri**Avahi laniger**Daubentonia madagascariensis*

Infraorder Lorisiformes

Superfamily Lorioidea

Family Lorisidae

Loris

(slender loris)

Nycticebus

(slow loris)

Arctocebus

(golden potto)

Perodicticus

(potto)

*Loris tardigradus**Nycticebus coucang**Nycticebus pygmaeus**Nycticebus intermedius**Arctocebus calabarensis**Perodicticus potto*

Subfamily Galaginae

Galago

(bush babies)

*Galago senegalensis**Galago crassicaudatus**Galago alleni*

Subgenus

Euoticus

(needle-clawed bush baby)

Galagoides

(dwarf bush baby)

*Galago (Euoticus) elegantulus**Galago (Euoticus) inustus**Galago (Galagoides) demidovii*

Infraorder Tarsiiformes

Superfamily Tarsioidea

Family Tarsiidae

Subfamily Tarsiinae

Tarsius

(tarsiers)

*Tarsius syrichta**Tarsius bancanus**Tarsius spectrum*

Suborder Anthropoidea

Infraorder Platyrrhini

Superfamily Ceboidea

Family Cebidae

Subfamily Aotinae

Aotus

(night monkey)

Aotus trivirgatus

<i>Callicebus</i> (titi monkeys)	<i>Callicebus torquatus</i> <i>Callicebus moloch</i> <i>Callicebus personatus</i>
Subfamily Pitheciinae	
<i>Cacajao</i> (uakaris)	<i>Cacajao melanocephalus</i> <i>Cacajao rubicundus</i> <i>Cacajao calvus</i>
<i>Pithecia</i> (sakis)	<i>Pithecia pithecia</i> <i>Pithecia monacha</i>
<i>Chiropotes</i> (bearded sakis)	<i>Chiropotes satanas</i> <i>Chiropotes albinasus</i> *
Subfamily Alouattinae	
<i>Alouatta</i> (howler monkeys)	<i>Alouatta villosa</i> <i>Alouatta seniculus</i> <i>Alouatta fusca</i> <i>Alouatta caraya</i> <i>Alouatta belzebuth</i>
Subfamily Cebinae	
<i>Cebus</i> (capuchin monkeys)	<i>Cebus apella</i> <i>Cebus capucinus</i> <i>Cebus albifrons</i> <i>Cebus nigrivittatus</i>
<i>Saimiri</i> (squirrel monkeys)	<i>Saimiri sciureus</i> <i>Saimir oerstedii</i>
Subfamily Atelinae	
<i>Ateles</i> (spider monkeys)	<i>Ateles paniscus</i> <i>Ateles belzebuth</i> <i>Ateles fusciceps</i> <i>Ateles geoffroyi</i>
<i>Brachyteles</i> (woolly spider monkey)	<i>Brachyteles arachnoides</i>
<i>Lagothrix</i> (woolly monkeys)	<i>Lagothrix lagothricha</i> <i>Lagothrix flavicauda</i>
Family Callitrichidae	
Subfamily Callimiconinae	
<i>Callimico</i> (Goeldi's marmoset)	<i>Callimico goeldii</i>
<i>Callithrix</i> (marmosets)	<i>Callithrix argentata</i> <i>Callithrix aurita</i>

	<i>Callithrix flaviceps</i>
	<i>Callithrix geoffroyi</i>
	<i>Callithrix jacchus</i>
	<i>Callithrix penicillata</i>
	<i>Callithrix humeralifer</i>
	<i>Callithrix chrysoleuca</i>
<i>Cebuella</i>	<i>Cebuella pygmaea</i>
(pygmy marmoset)	
<i>Saguinus</i>	<i>Saguinus tamarin</i>
(tamarins)	<i>Saguinus devillei</i>
	<i>Saguinus fuscicollis</i>
	<i>Saguinus fuscus</i>
	<i>Saguinus bicolor</i>
	<i>Saguinus martinsi</i>
	<i>Saguinus leucopus</i>
	<i>Saguinus inustus</i>
	<i>Saguinus midas</i>
	<i>Saguinus imperator</i>
	<i>Saguinus mystax</i>
<i>Leontideus</i>	<i>Leontideus rosalia</i>
(lion marmosets)	<i>Leontideus chrysomelas</i>
	<i>Leontideus chrysopygus</i>
<i>Oedipodmidas</i>	<i>Oedipomidas oedipus</i>
(pinche marmosets)	<i>Oedipomidas geoffroyi</i>
Infraorder Catarrhini	
Superfamily Cercopithecoidea	
Subfamily Cercopithecinae	
<i>Macaca</i>	<i>Macaca sylvana</i>
(macaques)	<i>Macaca mulatta</i>
	<i>Macaca fascicularis</i>
	<i>Macaca maurus</i>
	<i>Macaca fuscata</i>
	<i>Macaca speciosa</i>
	<i>Macaca sinica</i>
	<i>Macaca radiata</i>
	<i>Macaca cyclopsis</i>
	<i>Macaca silena</i>
	<i>Macaca nemestrina</i>
	<i>Macaca assamensis</i>
	<i>Macaca arctoides</i>
<i>Cynopithecus</i>	<i>Cynopithecus (Macaca) niger</i>
(Celebes black ape)	

<i>Cercocebus</i> (mangabeys)	<i>Cercocebus albigena</i> <i>Cercocebus aterrimus</i> <i>Cercocebus torquatus</i> <i>Cercocebus atys</i> <i>Cercocebus galeritus</i>
<i>Papio</i> (baboons)	<i>Papio hamadryas</i> <i>Papio anubis</i> <i>Papio cynocephalus</i> <i>Papio papio</i> <i>Papio ursinus</i>
<i>Papio</i> (<i>Mandrillus</i>) (mandrills)	<i>Papio</i> (<i>Mandrillus</i>) <i>sphinx</i> <i>Papio</i> (<i>Mandrillus</i>) <i>leucophaeus</i>
<i>Theropithecus</i> (gelada baboon)	<i>Theropithecus gelada</i>
<i>Cercopithecus</i> (guenons, vervets)	<i>Cercopithecus aethiops</i> <i>Cercopithecus pygerythrus</i> <i>Cercopithecus sabaues</i> <i>Cercopithecus cephus</i> <i>Cercopithecus diana</i> <i>Cercopithecus lhoesti</i> <i>Cercopithecus preussi</i> <i>Cercopithecus hamlyni</i> <i>Cercopithecus petaurista</i> <i>Cercopithecus mitis</i> <i>Cercopithecus albogularis</i> <i>Cercopithecus mona</i> <i>Cercopithecus campbelli</i> <i>Cercopithecus wolffi</i> <i>Cercopithecus denti</i> <i>Cercopithecus pogonias</i> <i>Cercopithecus neglectus</i> <i>Cercopithecus nictitans</i> <i>Cercopithecus ascanius</i> <i>Cercopithecus erythrotis</i> <i>Cercopithecus erythrogaster</i>
<i>Cercopithecus</i> (<i>Allenopithecus</i>) (Allen's swamp monkey)	<i>Cercopithecus</i> (<i>Allenopithecus</i>) <i>nigroviridis</i>
<i>Cercopithecus</i> (<i>Miopithecus</i>) (talapoin)	<i>Cercopithecus</i> (<i>Miopithecus</i>) <i>talapoin</i>
<i>Erythrocebus</i> (patas)	<i>Erythrocebus patas</i>

Subfamily Colobinae

Presbytis

(langurs)

*Presbytis entellus**Presbytis senex**Presbytis johnii**Presbytis aygula**Presbytis melalophos**Presbytis frontatus**Presbytis rubicundus**Presbytis cristatus**Presbytis obscurus**Presbytis phayrei**Presbytis francoisi**Presbytis potenziani**Presbytis pileatus**Presbytis geei**Pygathrix*

(douc langur)

*Pygathrix nemaeus**Rhinopithecus*

(snubnosed langurs)

*Rhinopithecus roxellanae**Rhinopithecus avunculus**Simias*

(Pagai island langur)

*Simias concolor**Nasalis*

(proboscis monkey)

*Nasalis larvatus**Colobus*

(guerezas)

*Colobus polykomos**Colobus guereza**Colobus (Procolobus) verus**Colobus (Piliocolobus) badius**Colobus (Piliocolobus) kirkii*

Superfamily

Family Hylobatidae

Subfamily Hylobatinae

Hylobates

(gibbons)

*Hylobates lar**Hylobates agilis**Hylobates moloch**Hylobates hoolok**Hylobates concolor**Hylobates klossii**Symphalangus*

(siamang)

Symphalangus syndactylus

Family Pongidae

Subfamily Ponginae

Pongo

(orangutan)

Pan

(chimpanzees)

Gorilla

(gorilla)

Pongo pygmaeus

Pan troglodytes

Pan paniscus

Gorilla gorilla

Superfamily Hominoidea

Family Hominidae

Homo

(human)

Homo sapiens

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