

AAZPA LIBRARIANS SPECIAL INTEREST GROUP BIBLIOGRAPHY SERVICE

This bibliography is provided as a service of the AAZPA LIBRARIANS SPECIAL INTEREST GROUP and THE CONSORTIUM OF AQUARIUMS, UNIVERSITIES AND ZOOS.

TITLE: HOWLER MONKEY BIBLIOGRAPHY

AUTHOR &
INSTITUTION: Dr. Barbara Baker
International Studbook Keeper
Black Howler Monkey
Riverbanks Zoo
Columbia, North Carolina

DATE: December 1988

Listed below is a collection of articles on howler monkey biology and husbandry. Copies of the majority of the articles are available from the studbook keeper. The articles are categorized by subject: Anatomy and Physiology, Behavior, Foraging and Nutrition, Genetics, Husbandry and Captive Management, Pathology, Population Studies, Reproduction, Taxonomy, and Veterinary Medicine.

Anatomy and Physiology

Chivers, D.J. and C.M. Hladik. 1980. Morphology of the gastrointestinal tract in primates: Comparisons with other mammals in relation to diet. Journal of Morphology, 166:337-386.

Claver, J.A., I. von Lawzewitsch, and O.J. Colillas. 1984. Microscopic anatomy of the ovary of Alouatta caraya. Primates, 25:362-371.

-----, O.J. Colillas, and B.L. Travi. 1984. Histological and microbiological aspects of the vagina in captive howler monkeys (Alouatta caraya). Primates, 25:110-116.

Corruccini, R.S., R.L. Ciochon, and H.M. McHenry. 1975. Osteometric shape relationships in the wrist joint of some anthropoids. Folia Primatologica, 24:250-274.

Cramer, D.L. 1986. Anatomy of the thoracic and abdominal viscera. In: M.R. Malinow, ed. Biology of the Howler Monkey (Alouatta caraya). Bibliotheca Primatologica, 7:90-103. New York:Karger.

Cristoffer, C. 1987. Body size differences between New World and Old World, arboreal tropical vertebrates: Cause and consequences. Journal of Biogeography, 14:165-172.

Frahm, H., R. Hassler, and S. Graisarn. 1979. Comparative volumetric studies on pallidum in insectivores and primates. Applied Neurophysiology, 42:91-94.

- Grand, T.I. 1968. The functional anatomy of the lower limb of the howler monkey (Alouatta caraya). American Journal of Physical Anthropology, 28:163-181.
- , 1968. Functional anatomy of the upper limb. In: M.R. Malinow, ed. Biology of the Howler Monkey (Alouatta caraya). Bibliotheca Primatologica, 7:104-125. New York:Karger.
- Hershkovitz, P. 1981. Comparative anatomy of platyrrhine mandibular cheek teeth dpm4, pm4, ml with particular reference to those of Homunculus (Cebidae), and comments on platyrrhine origins. Folia Primatologica, 35:179-217.
- Hilloowala, R.A. 1976. The primate hyolaryngeal apparatus and herbivorous modifications. Acta Anatomica, 95:260-278.
- Hofer, H.O. 1976. Preliminary study of the comparative anatomy of the external nose of South American monkeys. Folia Primatologica, 25: 193-214.
- , 1977. Taste areas of the plica sublingualis of Alouatta and Aotus (Primates, Platyrrhini). Cell and Tissue Research, 177: 415-429.
- Holinger, J. 1910. The larynx of Mycetes seniculus (howling monkey). Annals of Otology, Rhinology and Laryngology, 19:51-52.
- Kay, R.F. and W.L. Hylander. 1978. The dental structure of mammalian folivores with special reference to Primates and Phylangeroides. In: G.G. Montgomery, ed. The Ecology of Abooreal Folivores, pp.173-192. Washington, D.C.:Smithsonian Institution Press.
- Kelemen, G. and J. Sade. 1960. The vocal organ of the howling monkey (Alouatta palliata). Journal of Morphology, 107:123-140.
- Lusted, L.B. and R.S. Miller. 1968. Radiographic study of the postnatal skeletal development. In: M.R. Malinow, ed. Biology of the Howler Monkey (Alouatta caraya). Bibliotheca Primatologica, 7:81-89.
- Machida, H. and L. Giacometti. 1968. The skin. In: M.R. Malinow, ed. Biology of the Howler Monkey (alouatta caraya). Bibliotheca Primatologica, 7:126-140. New York:Karger.
- Malinow, M.R. and A. Corcoran. 1966. Growth of the lens in howler monkeys (Alouatta caraya). Journal of Mammalogy, 47:58-63.
- Rosenberger, A.L. 1983. Tale of tails: Parallelism and prehensility. American Journal of Physical Anthropology, 60:103-107.

- Rosenthal, H.L. 1968. Chronological age determination as estimated from strontium-90 content of teeth and bone. In: M.R. Malinow, ed. Biology of the Howler Monkey (Alouatta caraya). Bibliotheca Primatologica, 7:48-58. New York:Karger.
- Schon, M.A. 1964. Possible function of some pharyngeal and lingual muscles of the howling monkey (Alouatta seniculus). Acta Anatomica, 58:271-283.
- 1968. The muscular system of the red howling monkey. Bulletin of the United States National Museum, No.273. Washington, D.C.: Smithsonian Institution Press.
- 1971. The anatomy of the resonating mechanism in howling monkeys. Folia Primatologica, 15:227-132.
- Stahl, W.R., M.R. Malinow, C.A. Maruffo, L. Pope, B. Depaoli, and R. Depaoli. 1968. Growth and age estimation of howler monkeys. In: M.R. Malinow, ed. Biology of the Howler Monkey (Alouatta caraya). Bibliotheca Primatologica, 7:59-80. New York:Karger.
- Stern, J.T. Jr., J.P. Wells, W.L. Jungers, A.K. Vangor, and J.G. Fleagle. 1980. An electromyographic study of the pectoralis major in Atelines and Hylobates, with special reference to the evolution of a pars clavicularis. American Journal of Physical Anthropology, 52:13-25.
- Swindler, D.R., T.W. Jenkins, and A.W. Weiss, Jr. 1968. Fetal growth and development. In: M.R. Malinow, ed. Biology of the Howler Monkey (Alouatta caraya). Bibliotheca Primatologica, 7:28-47. New York:Karger.
- Tarrant, L.H. and D.R. Swindler. 1973. Prenatal dental development in the black howler monkey (Alouatta caraya). American Journal of Physical Anthropology, 38:255-259.
- Urbanowicz, M. and A. Prejzner-Morawska. 1985. The triceps surae muscle in platyrrhine monkeys. Folia Morphologica, 44:153-162.
- Ybarra, M.A. and G.C. Conroy. 1978. Non-metric features in the ulna of Aegyptopithecus, Alouatta, Ateles, and Lagothrix. Folia Primatologica, 29:178-195.
- Zingeser, M.R. 1966. Occlusofacial relationships in the mature howler monkey (Alouatta caraya). American Journal of Physical Anthropology, 24:171-179.
- 1967. Odontometric characteristics of the howler monkey (Alouatta caraya). Journal of Dental Research, 46:975-978.
- 1968. Functional and phylogenetic significance of integrated growth and form in occluding monkey canine teeth (Alouatta caraya and Macaca mulatta). American Journal of Physical Anthropology, 28: 263-270.

-----, 1968. Characteristics of the masticatory system. In: M.R. Malinow, ed. Biology of the Howler Monkey (Alouatta caraya). Bibliotheca Primatologica, 7:141-150. New York:Karger.

Behavior

Altmann, S.A. 1959. Field observations on a howling monkey society. Journal of Mammalogy, 40:317-330.

Baldwin, J.D. and J.I. Baldwin. 1973. Interactions between adult female and infant howling monkeys (Alouatta palliata). Folia Primatologica, 20:27-71.

----- and J.I. Baldwin. 1976. Vocalizations of howler monkeys (Alouatta palliata) in southwestern Panama. Folia Primatologica, 26: 81-108.

----- and J.I. Baldwin. 1978. Exploration and play in howler monkeys (Alouatta palliata). Primates, 19:411-422.

Bernstein, I.S. 1964. A field study of the activities of howler monkeys. Animal Behaviour, 12:92-97.

Bolin, I. 1981. Male parental behavior in black howler monkeys (Alouatta palliata pigra) in Belize and Guatemala. Primates, 22:349-360.

Braza, F., F. Alvarez, and T. Azcarate. 1981. Behaviour of the red howler monkey (Alouatta seniculus) in the Llanos of Venezuela. Primates, 22:459-473.

Carpenter, C.R. 1934. A field study of the behavior and social relations of the howling monkeys (Alouatta palliata). Comparative Psychology Monogram, 10:1-168. [Reprinted in 1964. In: C.R. Carpenter, ed. Naturalistic Behavior of Nonhuman Primates, pp.3-92. University Park, PA:Pennsylvania State University Press.]

-----, 1953. Grouping behavior of howling monkeys. Extrait des Archives Neelandaises de Zoologica, 10:45-50.

-----, 1965. The howler of Barro Colorado Island. In: I. Devore, ed. Primate Behavior, pp.250-291. New York:Holt, Rinehart and Winston.

Chapman, C. 1986. Behavioural development of howling monkey twins (Alouatta palliata) in Santa Rosa National Park, Costa Rica. Primates, 35:377-381.

Chivers, D.J. 1969. On the daily behaviour and spacing of howling monkey groups. Folia Primatologica, 10:48-102.

Clarke, M.R. 1982. Socialization, Infant Mortality and Infant-Mother Interactions in Howling Monkeys (Alouatta palliata) in Costa Rica. Ph.D. dissertation, University of California at Davis.

- , 1984. A comparison of behavior of male and female infant howling monkeys in a free-ranging group in Costa Rica. American Journal of Primatology, 6:401.
- , and K.E. Glander. 1981. A adoption in infant howling monkeys (Alouatta palliata). American Journal of Primatology, 1:469-472
- Crockett, C.M. 1984. Emigration by female red howler monkeys and the case for female competition. In: M.F. Small, ed. Female Primates: Studies by Women Primatologists, pp.159-173. New York:Alan R. Liss.
- , 1984. Family feuds. Natural History, 93:54-63.
- , 1987. Diet, dimorphism, and demography: Perspectives from howler to hominids. In: W.G. Kinzey, ed. The Evolution of Human Behavior: Primate Models, pp.115-135. New York:State University of N.Y. Press.
- and T. Pope. 1988. Inferring patterns of aggression from red howler monkey injuries. American Journal of Primatology, 15:289-308.
- and R. Sekulic. 1982. Infanticide with and without rapid male replacement in red howler monkeys (Alouatta seniculus). Wenner-Gren Symposium on Infanticide in Animals and Man, Ithaca, N.Y.
- and R. Sekulic. 1984. Infanticide in red howler monkeys (Alouatta seniculus). In: G.E. Hausfater and S.B. Hrdy, eds. Infanticide: Comparative and Evolutionary Perspectives, pp.173-191. New York: Aldine Publishing Company.
- Gaulin, J.C.S. and C.K. Gaulin. 1982. Behavioral ecology of Alouatta seniculus in Andean Cloud Forest. International Journal of Primatology, 3:1-32.
- Glander, K.E. 1974. Baby-sitting, infant sharing and adaptive behavior in mantled howling monkeys. American Journal of Physical Anthropology, 41:482.
- Horwich, R.H. and K. Gebhard. 1983. Roaring rhythms in black howler monkeys (Alouatta pigra) of Belize. Primates, 24:290-296.
- and K. Gebhard. 1986. Relation of allmothering to infant age in howlers, Alouatta pigra, with reference to Old World monkeys. In: D.M. Taub and F.A. King, eds. Current Perspectives in Primate Social Dynamics, pp.66-88. New York:Van Nostrand Reinhold.
- Izawa, K. 1976. Group sizes and compositions of monkeys in the upper Amazon basin. Primates, 17:367-398.
- Jones, C.B. 1978. Aspects of Reproductive Behavior in the Mantled Howler Monkey, Alouatta palliata Gray. Ph.D. dissertation, Cornell University.

- 1979. Grooming in the mantled howler monkey, Alouatta palliata Gray. Primates, 20:289-292.
- 1980. The functions of status in the mantled howler monkey, Alouatta palliata Gray: Intraspecific competition for group membership in a folivorous neotropical primate. Primates, 21:389-405.
- 1982. A field manipulation of spatial relations among male mantled howler monkeys. Primates, 23:130-134.
- 1983. Social organization of captive black howler monkeys (Alouatta caraya) "social competition" and the use of non-damaging behavior. Primates, 24:25-39.
- Mack, D. 1979. Growth and development of infant red howling monkeys (Alouatta seniculus) in a free ranging population. In: J.F. Eisenberg, ed. Vertebrate Ecology in the Northern Neotropics, pp.127-136. Washington, D.C.:Smithsonian Institution Press.
- Mendel, F. 1976. Postural and locomotor behavior of Alouatta palliata on various substrates. Folia Primatologica, 26:36-53.
- Milton, K. 1975. Urine-rubbing behavior in the mantled howler monkey Alouatta palliata. Folia Primatologica, 23:105-112.
- Mittermeier, R.A. 1973. Group activity and population dynamics of the howler monkey on Barro Colorado Island. Primates, 14:1-19.
- Mudry DePargament, M.D., M.L. DeVinuesa, and O.J. Colillas. 1984. Banding patterns of Alouatta caraya. Revista Bras Genet, 7:373-379.
- Neville, M.K. 1972. Social relations within troops of red howler monkeys (Alouatta seniculus). Folia Primatologica, 18:47-77.
- and A. Gunter. 1978. Allogrooming in howler monkeys. Paper presented at the 4th Annual Meeting of Central States Anthropological Society, University of Notre Dame, Indiana.
- and A. Gunter. 1979. Howler monkey allogrooming. Paper presented at the VIIth Congress of International Primatological Society, Bangalore, India.
- 1983. Social affinities in the Riverbanks howler monkeys. In: P.K. Seth, ed. Perspective in Primate Biology, pp.1-9. New Delhi, India:Today and Tomorrow's Printers and Publishers.
- Racenis, J. 1952. Some observations on the red howling monkey (Alouatta seniculus) in Venezuela. Journal of Mammalogy, 33:114-115.

- Richard, A. 1970. A comparative study of the activity patterns and behavior of Alouatta villosa and Ateles geoffroyi. Folia Primatologica, 12:241-263.
- Rudran, R. 1979. The demography and social mobility of a red howler (Alouatta seniculus) population in Venezuela. In: J.F. Eisenberg, ed. Vertebrate Ecology in the Northern Neotropics, pp.107-126. Washington, D.C.:Smithsonian Institution Press.
- Scott, N.J. Jr., L.A. Malmgren, and K.E. Glander. 1978. Grouping behaviour and sex ratio in mantled howling monkeys. In: D.J. Chivers and W. Lane-Petter, eds. Recent Advances in Primatology, Vol.1, pp.183-185. New York:Academic Press.
- Sekulic, R. 1981. The Significance of Howling in the Red Howler Monkeys. Ph.D. dissertation, University of Maryland.
- 1982a. Behavior and ranging patterns of a solitary female red howler (Alouatta seniculus). Folia Primatologica, 38:217-232.
- 1982b. Daily and seasonal patterns of roaring and spacing in four red howler Alouatta seniculus troops. Folia Primatologica, 39:22-48.
- 1983a. The effect of female call on male howling in red howler monkeys (Alouatta seniculus). International Journal of Primatology, 4:291-305.
- 1983b. Spatial relationships between recent mothers and other troop members in red howler monkeys (Alouatta seniculus). Primates, 24:475-485.
- 1983c. Male relationships and infant deaths in red howler monkeys (Alouatta seniculus). Zeitschrift fur Tierpsychologie, 61:185-202.
- and J.F. Eisenberg. 1983. Throat-rubbing in red howler monkeys (Alouatta seniculus). In: D. Muller-Schwarze and R.M. Silverstein, eds. Chemical Signals in Vertebrates, 3:347-350. New York:Plenum Press.
- Southwick, C.H. 1962. Patterns of inter-group social behavior in primates with special reference to rhesus and howling monkeys. Annals New York Academy of Science, 102:436-454.
- 1963. Challenging aspects of the behavioral ecology of howling monkeys. In: C.H. Southwick, ed. Primate Social Behavior, pp.185-191. Princeton, NJ:Van Nostrand.
- Whitehead, J.M. 1986. Long-distance Vocalization and Spacing in Mantled Howling Monkeys, Alouatta palliata. Ph.D. dissertation, University of North Carolina, Chapel Hill, NC.

- . 1987. Vocally mediated reciprocity between neighbouring groups of mantled howling monkeys, Alouatta palliata palliata. Animal Behaviour, 35:1615-1627.
- Whitten, P.L. 1987. Infants and adult males. In: B.B. Smuts, D.L. Cheney, R.M. Seyfarth, R.W. Wrangham, and T.T. Struhsaker, eds. Primate Societies, pp.343-357. Chicago:University of Chicago Press.
- Ybarra, M.A. 1984. Locomotion and postures of red howler monkeys in a deciduous forest-savanna interface. American Journal of Physical Anthropology, 63:65-76.
- . 1986. Loud calls of adult male red howling monkeys, (Alouatta seniculus). Folia Primatologica, 47:204-216.
- Young, O.P. 1981a. Copulation-interrupting behavior between females within a howler monkey troop. Primates, 22:135-136.
- . 1981b. Chasing behavior between males within a howler monkey troop. Primates, 22:424-426.
- . 1982a. Aggressive interaction between howler monkeys and turkey vultures: The need to thermoregulate behaviorally. Biotropica, 14: 228-231.
- . 1982b. Tree-rubbing behavior of a solitary male howler monkey. Primates, 23:303-306.
- Zucker, E.L. 1986. Male-male interactions in a group of mantled howling monkeys (Alouatta palliata) in Costa Rica. Paper presented at the Ninth Annual meeting of the American Society of Primatologists, Austin, Texas.

Foraging and Nutrition

- Braza, F., F. Alvarez, and T. Azcarate. 1983. Feeding habits of the red howler monkeys (Alouatta seniculus) in the Llanos of Venezuela. Mammalia, 47:205-214.
- Bilgener, M. 1987. Chemical Components of Howler Monkey (Alouatta palliata) Food Choice and Kinetics of Tannin Binding with Natural Components. Ph.D. dissertation, Boston University.
- Cant, J.G.H. 1986. Locomotion and feeding postures of spider and howling monkeys: Field study and evolutionary interpretation. Folia Primatologica, 46:1-14.
- Chapman, C.A. 1988. Foraging strategies, patch use, and constraintson group size in three species of Costa Rican primates. Dissertation Abstracts International.Biological Sciences (England), 48:2573.
- Chitolina, O.P. and M. Sander. 1981. Contribucao ao conhecimento da alimentacao de Alouatta guariba clamitans Cabrera, 1940 em habitat natural no Rio Grande do Sul (Cedidae, Alouattinae). Iheringia. Serie Zoologia Porto Alegre, 59:37-44.

- Coelho, A.M. Jr., C.A. Bramblett, L.B. Quick, and S.S. Bramblett. 1976. Resource availability and population density in primates: A socio-bioenergetic analysis of the energy budgets of Guatemalan howler and spider monkeys. Primates, 17:63-80.
- , C.A. Bramblett, and L.B. Quick. 1977. Social organization and food resource availability in primates: A socio-bioenergetic analysis of diet and disease hypotheses. American Journal of Physical Anthropology, 46:253-264.
- Cristoffer, C. 1987. Choice of feeding trees by three species of Brazilian primates: Effects of slope and tree size. Primate Conservation, 8:39.
- Estrada, A. 1984. Resource use by howler monkey (Alouatta palliata) in the rain forest of Los Tuxtlas, Veracruz, Mexico. International Journal of Primatology, 5:105-131.
- and R. Coates-Estrada. 1984a. Fruit eating and seed dispersal by howling monkeys (Alouatta palliata) in the rain forest of Los Tuxtlas, Mexico. American Journal of Primatology, 6:77-91.
- and R. Coates-Estrada. 1984b. A preliminary study of resource overlap between howling monkeys (Alouatta palliata) and other arboreal mammals in the tropical rain forest of Los Tuxtlas, Mexico. American Journal of Primatology, 9:27-37.
- and R. Coates-Estrada. 1986. Use of leaf resources by howling monkeys (Alouatta palliata) and leaf-cutting ants (Atta cephalotes) in the tropical rain forest of Los Tuxtlas, Mexico. American Journal of Primatology, 10:51-66.
- , R. Coates-Estrada, C. Vazquez-Yanes, and A. Orozco-Segovia. 1984. Comparison of frugivory by howling monkeys (Alouatta palliata) and bats (Artibeus jamaicensis) in the tropical rain forest of Los Tuxtlas, Mexico. American Journal of Primatology, 7:3-13.
- Fooden, J. 1964. Stomach contents and gastrointestinal proportions in wild-shot Guianan monkeys. American Journal of Physical Anthropology, 22:227-231.
- Gaulin, S.J. and L.E. Craker. 1979. Protein in vegetative and reproductive tissues of several neotropical species. Journal of Agricultural Food Chemistry, 27:791-795.
- Glander, K. 1975. Habitat and Resource Utilization: An Ecological View of Social Organization in Mantled Howling Monkeys. Ph.D. dissertation, University of Michigan.
- , 1977. Poison in a monkey's garden of eden. Natural History, 86: 34-41.

- . 1978a. Howling monkey feeding behavior and plant secondary compounds: A study of strategies. In: G.G. Montgomery, ed. The Ecology of Arboreal Folivores, pp.561-574. Washington, D.C.: Smithsonian Institution Press.
- . 1978b. Drinking from arboreal water sources by mantled howling monkeys (Alouatta palliata Gray). Folia Primatologica, 29:206-217.
- . 1981. Feeding patterns in mantled howling monkeys. In: A.C. Kamil and T.D. Sargent, eds. Foraging Behavior: Ecological, Ethological, and Psychological Approaches, pp.231-257. New York: Garland Press.
- Izawa, K. 1975. Foods and feeding behavior of monkeys in the upper Amazon Basin. Primates, 16:295-316.
- Jansen, D.H. 1983. Food webs: Who eats what, why, how, and what effects in a tropical forest. In: A.F. Galley, ed. Tropical Rain Forest Ecosystems. Ecosystems of the World, 14A:167-182. New York:Elsevier Scientific Publishing Company.
- Jones, C.B. 1983. Do howler monkeys feed upon legume flowers preferentially at flower opening time? Brenesia, 21:41-46.
- Leighton, M. and D.R. Leighton. 1982. The relationship of size of feeding aggregate to size of food patch: Howler monkeys (Alouatta palliata) feeding in Trichilia cipo fruit trees on Barro Colorado Island. Biotropica, 14:81-90.
- Milton, K. 1977. The foraging strategy of the howler monkey in the tropical forest of Barro Colorado Island, Panama. Dissertation Abstracts International:38.
- . 1978. Behavioral adaptations to leaf-eating by the mantled howler monkey (Alouatta Palliata). In: G.G. Montgomery, ed. Ecology of Arboreal Folivores, pp.535-549. Washington, D.C.: Smithsonian Institution Press.
- . 1979. Factors influencing leaf choice by howler monkeys: A test of some hypotheses of food selection by generalist herbivores. American Naturalist, 114:362-378.
- . 1980. The Foraging Strategy of Howler Monkeys: A Study in Primate Economics. New York:Columbia University Press.
- . 1981. Food choice and digestive strategies of two sympatric primate species. American Naturalist, 117:496-505.
- . 1982. Dietary quality and demographic regulation in a howler monkey population. In: E.G. Leigh, A.S. Rand, and D.M. Windsor, eds. The Ecology of a Tropical Forest: Seasonal Rhythms and Long-term Changes, pp.273-289. Washington, D.C.:Smithsonian Institution Press.

----- and R.H. McBee. 1983. Rates of fermentative digestion in the howler monkey, Alouatta palliata (Primates: Ceboidea). Comparative Biochemistry and Physiology, 74:29-31.

-----, P.J. Van Soest, and J. Robertson. 1980. Digestive efficiencies of wild howler monkeys. Physiological Ecology, 53:402-409.

Mittermeier, R.A. and M.G.M. van Roosmalen. 1981. Preliminary observations on habitat utilization and diet in eight Surinam monkeys. Folia Primatologica, 36:1-39.

Nagy, K.A. and K. Milton. 1979. Energy metabolism and food consumption by wild howler monkeys (Alouatta palliata). Ecology, 60:475-480.

----- and K. Milton. 1979. Aspects of dietary quality, nutrient assimilation and water balance in wild howler monkeys (Alouatta palliata). Oecologia, 39:249-258.

Rockwood, L.L. and K.E. Glander. Howling monkeys and leaf-cutting ants: Comparative foraging in a tropical deciduous forest. Biotropica, 11: 1-10.

Rylands, A.B. 1987. Primate communities in Amazonian forests: Their habitats and food resources. Experientia, 43:265-279.

Schlichte, H.J. 1978. A preliminary report on the habitat utilization of a group of howler monkeys (Alouatta villosa pigra) in the National Park of Tikal, Guatemala. In: G.G. Montgomery, ed. The Ecology of Arboreal Folivores, pp.551-560. Washington, D.C.:Smithsonian Institution Press.

Skaggs, S.C. 1986. Resource Utilization by Mantled Howler Monkeys (Alouatta palliata) During the Dry Season in a Dry Tropical Forest. Honors thesis, Macalester College.

Ullrey, D. 1986. Nutrition of primates in captivity. In: K. Benirschke, ed. Primates: the Road to Self-sustaining Populations, pp.823-835. New York:Springer-Verlag.

Westoby, M. 1974. An analysis of diet selection by large generalist herbivores. American Naturalist, 108:290-304.

Whitehead, J.M. 1986. Development of feeding selectivity in mantled howling monkeys, Alouatta palliata. In: J.G. Else and P.C. Lee, eds. Primate Ontogeny, Cognition and Social Behavior, pp.105-118. New York:Cambridge University Press.

Genetics

Egozcue, J. and M.V. Egozcue. 1966. The chromosome complement of the howler monkey (Alouatta caraya, Humboldt 1812). Cytogenetics, 5:

20-27.

- and M.V. Egozcue. 1968. The somatic chromosomes. In: M.R. Malinow, ed. *Biology of the Howler Monkey (Alouatta caraya)*. *Bibliotheca Primatologica*, 7:21-27. New York:Karger.
- Jones, T.C., R.W. Thorington, A. Miller, and L. Morgan. 1975. Y-autosome translocation in the howler monkey, *Alouatta palliata*. *Journal of Medical Primatology*, 4:299-307.
- Yunis, E.J., O.M. Torres de Caballero, C. Ram, and Z.E. Ram. 1976. Chromosomal variations in the primate *Alouatta seniculus seniculus*. *Folia Primatologica*, 25:215-224.

Husbandry and Captive Management

- Benton, L. Jr. 1976. The establishment and husbandry of a black howler *Alouatta caraya* colony at Colombia Zoo. *International Zoo Yearbook*, 16:149-152.
- Brockman, D.K. 1983. Bolivian red howlers and the birth of an infant. *Zoonooz* (San Diego Zoo), 60:4-9.
- Collins, L. and M. Roberts. 1978. Arboreal folivores in captivity - maintenance of a delicate minority. *In: E.G. Leigh, A.S. Rand, and D.M. Windsor, eds. *The Ecology of a Tropical Forest: Seasonal Rhythms and Long-term Changes*, pp.5-12. Washington, D.C.: Smithsonian Institution Press.*
- Crandall, L.S. 1964. Family Cebidae. *In: The Management of Wild Animals in Captivity*, pp.85-90. Chicago:University of Chicago Press.
- Ditmars, G. 1922. Rearing a red howler monkey. *Bulletin of New York Zoological Society*, 25:33-39.
- Dumond, F.V. 1967. Semi-free-ranging colonies of monkeys at Goulds Monkey Jungle. *International Zoo Yearbook*, 7:202-207.
- Estrada, A. 1982. A case of adoption of a howler monkey infant (*Alouatta villosa*) by a female spider monkey (*Ateles geoffroyi*). *Primates*, 23:135-137.
- Lindbergh, S. 1976. Natural social structures and feeding procedures in the acclimatizing of South American primates. *International Zoo Yearbook*, 16:146-149.
- Malinow, M.R., B.L. Pope, J.R. Depaoli, and S. Katz. 1968. Laboratory observations on living howlers. *In: M.R. Malinow, ed. *Biology of the Howler Monkey (Alouatta caraya)*. *Bibliotheca Primatologica*, 7:224-230. New York:Karger.*
- Merritt, D.A. Jr. 1982. Behavioural considerations in the acclimatisation and nutrition of young black howlers. *International Zoo Yearbook*, 22:128-131.

Shoemaker, A.H. 1977. Observations on howler monkeys (Alouatta caraya) in captivity. Zoological Garten N.F. (Jena), 47:225-234.

Soini, P. 1972. The capture and commerce of live monkeys in the Amazonian region of Peru. International Zoo Yearbook, 12:26-36.

Whitehead, M. 1984. Howler monkeys (Alouatta sp.) and uakaris (Cacajao spp.) in captivity and the field: A review with reference to experiences at Twycross Zoo, U.K. In: Proceedings of Symposium of the Association of British Wild Animal Keepers, 8:5-21.

Pathology

Baerg, D.C. and M.D. Young. 1970. Plasmodium falciparum infection induced in the black spider monkey, Ateles fusciceps, and black howler monkey, Alouatta villosa. Transcripts of Royal Society of Tropical Medicine Hygiene, 64:193-194.

Clarkson, T.B., N.D. Lehner, B.C. Bullock, H.B. Lofland, and W.D. Wagner. 1976. Atherosclerosis in new world monkeys. Primate Medicine, 9: 90-144.

Deane, L.M. and F.B. de Almeida. 1967. Natural infection of red howler monkeys, Alouatta seniculus stramines, with Plasmodium brasilianum, in the State of Amazonas, Brazil. Rev Institue Medical Tropica Sao Paulo, 9:359-360.

-----, M.P. Deane, and J. Ferreira Neto. 1966. A naturally aquired human infection of Plasmodium simium of howler monkeys. Transcripts of Royal Society of Tropical Medical Hygiene, 60:563-564.

Downs, W.G. 1982. The known and the unknown in yellow fever ecology and epidemiology. Ecology of Disease, 1:103-110.

Gesham, G.A. 1976. Primate atherosclerosis. Monogram of Atherosclerosis, 7:1-95.

Hall, W.B., H.E. Grupe, and C.K. Claycomb. 1968. The periodontium and periodontal pathology. In: M.R. Malinow, ed. Biology of the Howler Monkey (Alouatta caraya). Bibliotheca Primatologica, 7:190-203. New York:Karger.

Kourany, M. and R.N. Rossan. 1971. A subcutaneous abscess associated with Salmonella typhimurium in a black howler monkey (Alouatta villosa). Laboratory Animal Science, 21:412-414.

Malinow, M.R. and C.A. Maruffo. 1965. Aortic atherosclerosis in free-ranging howler monkeys (Alouatta caraya). Nature, 206:948-949.

- and C.A. Maruffo. 1966. Naturally occurring atherosclerosis in howler monkeys (*Alouatta caraya*). *Journal of Atherosclerosis Research*, 6:368-380.
- and C.A. Storvick. 1966. Spontaneous coronary lesions in howler monkeys (*Alouatta caraya*). *Journal of Atherosclerosis Research*, 8:421-431.
- and C.A. Maruffo. 1968. Arterial pathology. In: M.R. Malinow, ed. *Biology of the Howler Monkey (Alouatta caraya)*. *Bibliotheca Primatologica*, 7:175-189. New York:Karger.
- Maruffo, C.A. and M.R. Malinow. 1966. Aortic mediocalcinosis in a howler monkey (*Alouatta caraya*). *Journal of Pathological Bacteriology*, 92: 236-238.
- Maruffo, C.A. and M.R. Malinow. 1966. Seminoma in a howler monkey (*Alouatta caraya*). *Journal of Pathological Bacteriology*, 91:280-182.
- and M.R. Malinow. 1966. Dissecting aneurysm of the aorta in a howler monkey (*Alouatta caraya*). *Journal of Pathological Bacteriology*, 92:567-570.
- , 1968. General pathology. In: M.R. Malinow, ed. *Biology of the Howler Monkey (Alouatta caraya)*. *Bibliotheca Primatologica*, 7: 151-174. New York:Karger.
- Rangan, S.R. 1976. Oncornavirus particles in lymphoid cultures from a howler monkey with Herpesvirus saimiri-induced disease. *Journal of National Cancer Institute*, 57:951-953.
- , L.N. Martin, F.M. Enright, and C.R. Abee. 1977. Herpesvirus saimiri-induced lymphoproliferative disease in howler monkeys. *Journal of the National Cancer Institute*, 59:165-171.
- Rossan, R.N. and D.C. Baerg. 1975. Development of falciparum malaria in a Panamanian subspecies of howler monkey. *The American Journal of Tropical Medicine and Hygiene*, 24:1035-1036.
- Smith, J.D., H.H. Genoways, and J.K.K. Jones Jr. 1977. Cranial and dental anomalies in three species of platyrrhine monkey from Nicaragua. *Folia Primatologica*, 28:1-42.

Population Studies

- Baldwin, J.D. and J.I. Baldwin. 1972. Population density and use of space in howling monkeys (*Alouatta villosa*) in Southwestern Panama. *Primates*, 13:371-379.
- Braza, F. and J.E. Garcia. 1988. Preliminary report on monkeys inhabiting the mountainous region of Huanchaca, Bolivia. *Folia Primatologica*, 49:182-186.

- Clarke, M.R., E.L. Zucker, and N.J. Scott Jr. 1986. Population trends of the mantled howler groups of La Pacifica, Guanacastee, Costa Rica. American Journal of Primatology, 11:79-88.
- Collias, N. and C. Southwick. 1952. A field study of population density and social organization in howling monkeys. Proceedings of the American Philosophical Society, 96:143-156.
- Crockett, C. 1985. Population studies of red howler monkeys (Alouatta seniculus). National Geographic Research, 1:264-273.
- , and J.F. Eisenberg. 1987. Howlers: Variations in group size and demography. In: B.B. Smuts, D.L. Cheney, R.M. Seyfarth, R.W. Wrangham, and T.T. Struhsaker, eds. Primate Societies, pp.54-68. Chicago:University of Chicago Press.
- Dahl, J.F. 1987. Conservation of primates in Belize, Central America. Primate Conservation, 8:119-121.
- Estrada, A. 1982. Survey and census of howler monkeys (Alouatta palliata) in the rain forest of "Los Tuxtlas" Veracruz, Mexico. American Journal of Primatology, 2:363-372.
- and R. Coates-Estrada. 1988. Tropical rain forest conversion and perspectives in the conservation of wild primates (Alouatta and Ateles in Mexico. American Journal of Primatology, 14:315-327.
- Fedigan, L.M. 1986. Demographic trends in the Alouatta palliata and Cebus capucinus populations of Santa Rosa National Park, Costa Rica. In: J.G. Else and P.C. Lee, eds. Primate Ecology and Conservation, pp.285-294. New York:Cambridge University Press.
- Fishkind, A.S. and R.W. Sussman. 1987. Preliminary studies of the primates of the Zona Protectora and La Selva Biological Station, Northeast Costa Rica. Primate Conservation, 8:63-66.
- Freese, C. 1976. Censusing Alouatta palliata, Ateles geoffroyi and Cebus capucinus in the Costa Rican Dry Forest. In: R.W. Thorington Jr. and P.G. Heltne, eds. Neotropical Primates: Field Studies and Conservation, pp.4-10. Washington, D.C.:National Academy of Sciences.
- Froehlich, J.W. and P.H. Froehlich. 1987. The status of endemic howling monkeys. Primate Conservation, 8:58-62.
- Heltne, P.G., D.C. Turner, and N.J. Scott Jr. 1975. Comparison of census data on Alouatta palliata from Costa Rica and Panama. In: R.W. Thorington Jr. and P.G. Heltne, eds. Neotropical Primates: Field Studies and Conservation, pp.10-19. Washington, D.C.:National Academy of Sciences.
- Horwich, R.H. 1986. A community baboon sactuary in Belize. Primate Conservation, 7:15.

- and E.D. Johnson. 1986. Geographical distribution of the black howler (Alouatta pigra) in Central America. Primates, 27:53-62.
- Langgath, A., D.M. Texeira, R.A. Mittermeier, and C. Bonvicino. 1987. The red-handed howler monkey in Northeastern Brazil. Primate Conservation, 8:36-39.
- Milton, K. and R.A. Mittermeier. 1977. A brief survey of the primates of Coiba Island, Panama. Primates, 18:931-936.
- Mittermeier, R.A. 1973. Group activity and population dynamics of the howler monkey on Barro Colorado Island. Primates, 14:1-19.
- Neville, M.K. 1972. The population structure of the red howler monkey (Alouatta seniculus) in Trinidad and Venezuela. Folia Primatologica, 17:56-86.
- Pope, B.L. 1968. Population characteristics. In: M.R. Malinow, ed. Biology of the Howler Monkey (Alouatta caraya). Bibliotheca Primatologica, 7:13-20. New York:Karger.
- . 1966. The population characteristics of howler monkeys (Alouatta caraya) in Northern Argentina. American Journal of Physical Anthropology, 24:361-370.
- Rudran, R. 1979. The demography and social mobility of a red howler (Alouatta seniculus) population in Venezuela. In: J.F. Eisenberg, ed. Vertebrate Ecology in the Northern Neotropics, pp.107-126. Washington, D.C.:Smithsonian Institution Press.
- Santos, I.B., R.A. Mittermeier, A.B. Rylands, and C.M.C. Valle. 1987. The distribution and conservation status of primates in Southern Bahai, Brazil. Primate Conservation, 8:126-142.
- Scott, N.J. Jr., T.T. Struhsaker, K. Glander, and H. Chirivis. 1976. Primates and their habitats in northern Colombia with recommendations for future management and research. In: Proceedings of First Inter-American Conference on Conservation and Utilization of American Nonhuman Primates in Biomedical Research, pp.30-50. Washington, D.C.:World Health Organization.
- Smith, J.D. 1970. The systemic status of the black howler, Alouatta pigra Lawrence. Journal of Mammalogy, 51:358-369.
- Thornington, R.W. Jr., R.J. Cesar, and J.F. Eisenberg. 1984. A study of a black howling monkey (Alouatta caraya) population in northern Argentina. American Journal of Primatology, 6:357-366.

Reproduction

- Clarke, M.R. and K.E. Glander. 1984. Female reproductive success in a group of free-ranging howling monkeys (*Alouatta palliata*) in Costa Rica. In: M.F. Small, ed. Female Primates: Studies by Women Primatologists, pp.111-126. New York:Alan R. Liss, Inc.
- Crockett, C.M. and R. Rudran. 1987. Red howler monkey birth data I: Seasonal variation. American Journal of Primatology, 13:347-368.
- and R. Rudran. 1987. Red howler monkey birth data II: Interannual, habitat, and sex comparisons. American Journal of Primatology, 13:369-384.
- and R. Rudran. 1982. Gestation length in red howler monkeys. American Journal of Primatology, 3:291-294.
- Glander, K.E. 1980. Reproduction and population growth in free-ranging mantled howling monkeys. American Journal of Physical Anthropology, 53:25-36.
- Hays, K.C., G. Faye, A. Roach, and F.J. Stare. 1972. Breeding new World monkeys in a laboratory environment. In: W.I.B. Beveridge, ed. Breeding Primates, pp.122-129. Basel:Karger.
- Horwich, R.H. 1983. Breeding behaviors in the black howler monkey (*Alouatta pigra*) of Belize. Primates, 24:222-230.
- Jones, C.B. 1985. Reproductive patterns in mantled howler monkeys: Estrus, mate choice, and copulation. Primates, 26:130-142.
- Jones, M.L. 1986. Successes and failures of captive breeding. In: K. Benirschke, ed. Primates, the Road to Self-sustaining Populations, pp.251-260. New York:Springer-Verlag.
- Shoemaker, A.H. 1979. Reproduction and development of the black howler monkey (*Alouatta caraya*) at Columbia Zoo. International Zoo Yearbook, 19:150-155.
- , 1982. Fecundity in the captive howler monkey, *Alouatta caraya*. Zoo Biology, 1:149-156.
- , 1982. Second generation black howler monkey born. Laboratory Primate Newsletter, 21:21.
- Wolf, R.H., R.M. Harrison, and T.W. Martin. 1975. A review of reproductive patterns in new world monkeys. Laboratory Animal Science, 25:814-821.

Taxonomy

- Baker, F.C. 1910. Zoology of *Mycetes seniculus*. Annual of Rhinology and Laryngology, 19:61-62.

- Hall, E.R. 1981. Genus of Alouatta Lacepede howler monkeys. In: The Mammals of North America, pp.260-262. New York:John Wiley and Sons.
- Hill, W.C.O. 1962. Alouattinae Elliot, 1904. In: Primates, Comparative Anatomy and Taxonomy, Cebidae, Part B, 3-142. Edinburgh:University Press.
- Honacki, J.H., K.E. Kinman, and J.W. Koepl, eds. 1982. Family Cebidae. In: Mammals Species of the World, pp.225-229. Lawrence, Kansas: Allen Press, Inc.
- Horwich, R.H. 1983. Species status of the black howler monkey, Alouatta pigra, of Belize. Primates, 24:288-289.
- , 1984. Geographic distribution and status of the black howler monkey. Primate Conservation, 4:25-27.
- Lawrence, B. 1933. Howler monkeys of the palliata group. Bulletin of Museum of Comparative Zoology, 75:313-354.
- Napier, J.R. and P.H. Napier. 1967. The systematic status of the black howler monkey, Alouatta. In: A Handbook of Living Primates, pp.47-51. New York:Academic Press.
- Smith, J.D. 1970. The systematic status of the black howler monkey, Alouatta pigra Lawrence. Journal of Mammalogy, 51:358-369.
- Thorington, R. W. Jr., R. Rudran, and D. Mack. 1979. Sexual dimorphism of Alouatta seniculus and observations on capture techniques. In: Vertebrate Ecology in the Northern Neotropics, pp.97-106. Washington, D.C.:Smithsonian Institution Press.
- Wolfheim, J.H. 1963. Cebidae. In: Primates of the World, pp.209-236. Seattle:University of Washington Press.

Veterinary Medicine

- Coatney, R.G., W.E. Collins, M.W. Warren, and P.G. Contacos. 1971. The Primate Malarias. Washington, D.C.:U.S. Government Printing Office.
- Colillas, O.J. 1978. Repeated sedation of the howler monkey (Alouatta caraya) with ketamine hydrochloride. Laboratory Animal Science, 28:101.
- Deane, L.M. 1972. Plasmodia of monkeys and malaria eradication in Brazil. International Zoo Yearbook, 12:56-60.
- Drohan, W., D. Colcher, G. Schochetman, and J. Schlom. 1977. Distribution of Mason-Pfizer virus-specific sequences in the DNA of primates. Journal of Virology, 23:36-43.

- Fiennes, R. 1967. Ectoparasites. Endoparasites. Protozoa. In: Zoonoses of Primates, pp.30-76. London:Weidenfeld and Nicolson.
- Froehlich, J.W., W.W. Socha, A.S. Wiener, J. Moor-Janowski, and R.W. Thorington. 1977. Blood groups of the mantled howler monkey (Alouatta palliata). Journal of Medical Primatology, 6:219-231.
- Garver, F.A. and D.W. Talmage. 1975. Comparative immunochemical studies of primate hemoglobins. Biochemical Genetics, 13:743-757.
- Hendricks, L.D. 1977. Host range characteristics of the primate coccidian, Isospora arctopithecii Rodhain 1933 (Protozoa: Eimeriidae). The Journal of Parasitology, 63:32-35.
- Kordich, L., S. Katz, and M.R. Malinow. 1968. Blood clotting in the howler monkey (Alouatta caraya). Laboratory Animal Care, 18:371-373.
- Kuntz, R.E. and B.J. Myers. 1972. Parasites of South American primates. International Zoo Yearbook, 12:61-68.
- Maruffo, C.A. and M.R. Malinow. 1966. Postnatal changes in the aorta of howler monkey (Alouatta caraya). Journal of Gerontology, 21:119-123.
- Milton, K., T.M. Casey, and K.K. Casey. 1979. The basal metabolism of mantled howler monkeys (Alouatta palliata). Journal of Mammalogy, 60:373-376.
- Persellin, R.H. and R.J. Chang. 1978. Multiple IgM autoantibodies in a non-human primate. Developmental and Comparative Immunology, 2: 713-725.
- and L.L. Wilson. 1968. Antiglobulins resembling human rheumatoid factor in howler monkeys. In: M.R. Malinow, ed. Biology of the Howler Monkey (Alouatta caraya). Bibliotheca Primatologica, 7: 209-223. New York:Karger.
- Pope, B.L. 1968. Parasites. In: M.R. Malinow, ed. Biology of the Howler Monkey (Alouatta caraya). Bibliotheca Primatologica, 7: 204-208. New York:Karger.
- Porter, J.A. Jr. 1971. Hematologic values of the black spider monkey (Ateles fusciceps), red spider monkey (Ateles geoffroyi), white face monkey (Cebus capucinus), and black howler monkey (Alouatta villosa). Laboratory Animal Science, 21:426-433.
- Rangan, S.R.S., L.N. Martin, and R.H. Wolf. 1976. In vitro survival of howler monkey (Alouatta caraya) and other simian lymphocytes. Journal of Medical Primatology, 5:210-222.

- Scott, N.J. Jr., A.F. Scott, and L.A. Malmgren. 1976. Capturing and marking howler monkeys for field behavioral studies. Primates, 17: 527-533.
- Valsecchi, R.M., O.J. Degrossi, and N. Altschuler. 1980. Thyroid studies in the new world primate (Alouatta caraya). International Journal of Nuclear Medicine and Biology, 7:43-45.
- Young, M.D., D.C. Baerg, and R.N. Rossan. 1975. Parasitological review. Experimental monkey hosts for human plasmodia. Experimental Parasitology, 38:136-152.

This information is provided as a service of
The Consortium of Aquariums, Universities and Zoos (C.A.U.Z.)
Donna FitzRoy Hardy, Ph.D., Network Coordinator
Consortium of Aquariums, Universities and Zoos
Department of Psychology
California State University, Northridge
Northridge, CA 91330
