

Primate Locomotion

[DOWNLOAD HERE](#)

1;Foreword;6 2;Contents;12 3;Contributors;14 4;Chapter 1: Introduction. Primate Locomotion: Toward a Synergy of Laboratory and Field Research;18 4.1;References;22 5;Chapter 2: Translating Primate Locomotor Biomechanical Variables from the Laboratory to the Field;24 5.1;Introduction;25 5.2;Variables That Can Be Collected Under Field and Laboratory Conditions;27 5.2.1;Gait Choice;27 5.2.2;Footfall Sequence and Limb Timing;27 5.2.3;Limb Protraction and Retraction;29 5.2.4;Contact Time;29 5.2.5;Elbow Yield;29 5.3;Performance Measures Examined;31 5.3.1;Stability;31 5.3.2;Peak Ground Forces;31 5.3.3;Metabolic Costs;31 5.4;The Connection Between Biomechanical Variables and Performance Measures;34 5.4.1;Gait Choice, Stability, and Energy Efficiency;34 5.4.2;Limb Protraction, Contact Time, and Elbow Yield;37 5.4.3;Stride Frequency and Locomotor Cost;39 5.5;Conclusion;39 5.6;References;40 6;Chapter 3: Studying Captive Ape Locomotion: Past, Present, and Future;45 6.1;Introduction;46 6.2;Research Ex Situ: Accomplishments;47 6.2.1;High-Tech Experimental Setups;47 6.2.2;Locomotion in Bonobos;48 6.2.3;Locomotion in Gibbons;50 6.3;Research Ex Situ: Current Issues and How to Deal with Them;51 6.3.1;Substrate Complexity;51 6.3.2;Gait Variability;54 6.4;Need for Field Studies;55 6.4.1;Locomotor Behavior in Captivity: Representative of the Wild?;55 6.4.2;Which Gaits Should Be Studied Ex Situ?;56 6.4.3;Substrate Use and Substrate Properties in the Wild;57 6.4.4;Energetics: Importance of Efficiency?;58 6.5;Conclusions;58 6.6;References;58 7;Chapter 4: Experimental and Computational Studies of Bipedal Locomotion in the Bipedally Trained Japanese Macaque;63 7.1;Introduction;64 7.2;Kinematics of Bipedal Locomotion in Trained and Ordinary Japanese Macaques;65 7.3;Ground Reaction Force Profiles of Bipedal Locomotion in Trained and Ordinary Japanese Macaques;67 7.4;Musculoskeletal Model of Japanese Macaques;69 7.5;Musculoskeletal Motion During Bipedal Locomotion in Trained Japanese Macaques;71 7.6;Computer Simulation of Locomotion;73 7.7;Conclusion;74 7.8;Acknowledgments;74 7.9;References;74 8;Chapter 5: In What Manner Do Quadrupedal Primates Walk on Two Legs? Preliminary Results on Olive Baboons (*Papio anubis*);76 8.1;Introduction;77 8.2;Materials and Methods;78 8.2.1;Subjects;78 8.2.2;Protocols and Study Site;78 8.2.2.1;The Motion Capture Protocol;79 8.2.2.2;Motion Analysis;79 8.3;Results;81 8.3.1;General

Features of the Bipedal Locomotor Mode;81 8.3.2;Type of Foot Contact to the Ground;84 8.3.3;Vertical Excursion of Joint Centers;84 8.3.4;Spatiotemporal Parameters;84 8.3.5;Joint Angles;87 8.4;Discussion and Perspectives;91 8.5;Acknowledgments;94 8.6;References;94 9;Chapter 6: Scapula Movements and Their Contribution to Three-Dimensional Forelimb Excursions in Quadrupedal Primates;98 9.1;Introduction;99 9.2;Materials and Methods;101 9.2.1;Subjects;101 9.2.2;Motion Analysis;101 9.2.3;Morphometry;102 9.3;Results and Discussion;104 9.3.1;Scapular Motion in Cranio-caudal Direction and Its Importance for Limb Pro- and Retraction;104 9.3.2;Scapular Motion and Its Importance for Three-Dimensional Forelimb Excursions;108 9.3.3;Different Patterns of Shoulder Motion and Their Evolutionary Aspects;109 9.3.4;Morphological Correlates of Scapular Mobility;112 9.4;Conclusion;118 9.5;Acknowledgments;120 9.6;References;120 10;Chapter 7: The Influence of Load Carrying on Gait Parameters in Humans and Apes: Implications for the Evolution of Human Bipedalism;124 10.1;Introduction;125 10.1.1;Human Carrying Observations;127 10.1.2;Human Gait Parameters;127 10.1.3;Ape Gait Parameters;128 10.2;Methods;128 10.2.1;Human Carrying Observations;128 10.2.2;Human Gait Parameters;129 10.2.3;Ape Gait Parameters;130 10.2.4;Data Normalization;132 10.3;Results;133 10.3.1;Human Carrying Observations;133 10.3.2;Human Gait Parameters;133 10.3.3;Ape Gait Parameters;136 10.3.3.1;Bonobos;136 10.3.3.2;G EAN/ISBN : 9781441914200
Publisher(s): Springer, Berlin, Springer Science & Business Media Discussed keywords: Primaten Format: ePub/PDF Author(s): D'Aout, Kristiaan - Vereecke, Evie E.

[DOWNLOAD HERE](#)

Similar manuals:

[Primate Locomotion](#)

[Vernunft, Bewusstsein, Sprache Und Kultur Der HÃ¶heren Primaten: Zur Anthropologischen Grundfrage Nach Den Unterschieden Zwischen Tier Und Mensch - Katja Nixdorf](#)

[Primaten Des OligozÄns - Ursula Wittlich](#)