

1. Record Nr.	UNINA9910634043703321
Titolo	The Evolution of the Primate Foot : Anatomy, Function, and Palaeontological Evidence // edited by Angel Zeininger, Kevin G. Hatala, Roshna E. Wunderlich, Daniel Schmitt
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2022
ISBN	3-031-06436-4
Edizione	[1st ed. 2022.]
Descrizione fisica	1 online resource (527 pages)
Collana	Developments in Primatology: Progress and Prospects, , 1574-3497
Disciplina	599.938 599.8
Soggetti	Evolution (Biology) Anatomy Physical anthropology Physiology Ecology Evolutionary Biology Physical-Biological Anthropology Animal Physiology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction -- Clinical and Evolutionary Perspectives on the Primate Foot: A Historical and Contemporary View -- The Primate Ankle and Hindfoot -- The Primate Midfoot and Human Longitudinal Arch -- The Primate Forefoot -- Myology of the Primate Foot -- The Integument and Associated Structures of the Primate Foot -- Experimental Research on Foot Use and Function During Climbing by Primates -- Foot Posture During Quadrupedal Walking in Primates -- Primate Foot Use During Bipedal Walking -- Running in Addition to Walking Helped Shape the Human Foot -- The Feet of Paleogene Primates -- Miocene Ape Feet -- The Early Hominin Foot -- The Feet of Fossil Homo -- Locomotor behavior of the sloth lemurs (Palaeopropithecidae) and the function and anatomy of a foot adapted for suspensory locomotion -- Recent Developments and Future Directions for the Study of Primate

Feet.

Sommario/riassunto

The human foot is a unique and defining characteristic of our anatomy. While most primates have grasping, prehensile feet, the human foot stands out as a powerful non-grasping propulsive lever that is central to our evolution as adept bipedal walkers and runners. Very few books have compiled and evaluated key research on the primate foot and provided a perspective on what we know and what we still need to know. This book serves as an essential companion to "The Evolution of the Primate Hand" volume, also in the *Developments in Primatology* series. This book includes chapters written by experts in the field of morphology and mechanics of the primate foot, the role of the foot in different aspects of primate locomotion (including but not limited to human bipedalism), the "hard evidence" of primate foot evolution including fossil foot bones and fossil footprints, and the relevance of our foot's evolutionary history to modern human foot pathology. This volume addresses three fundamental questions: (1) What makes the human foot so different from that of other primates? (2) How does the anatomy, biomechanics, and ecological context of the foot and foot use differ among primates and why? (3) How did foot anatomy and function change throughout primate and human evolution, and why is this evolutionary history relevant in clinical contexts today? This co-edited volume, provides, for the first time, a comprehensive review and scholarly discussion of the primate foot from multiple perspectives. It is accessible to readers at different levels of inquiry (e.g., undergraduate/graduate students, postdoctoral researchers, other scholars outside of biological anthropology). This volume provides an all-in-one resource for research on the comparative and functional morphology and evolution of the primate foot.