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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Sauropod biology and the evolution of gigantism: what do we know? / Marcus Clauss -- Sauropod feeding and digestive physiology / Jurgen Hummel and Marcus Clauss -- Dietary options for the sauropod dinosaurs from an integrated botanical and paleobotanical perspective / Carole T. Gee -- The diet of sauropod dinosaurs: implications of carbon isotope analysis on teeth, bones, and plants / Thomas Tutken -- Structure and function of the sauropod respiratory system / Steven F. Perry, Thomas Breuer, and Nadine Pajor -- Reconstructing body volume and surface area of dinosaurs using laser scanning and photogrammetry / Stefan Stoinski, Tim Suthau, and Hanns-Christian Gunga -- Body mass estimation, thermoregulation, and cardiovascular physiology of large sauropods / Bergita Ganse ... [et al.] -- How to get big in the Mesozoic: the evolution of the sauropodomorph body plan / Oliver W.M. Rauhut ... [et al.] -- Characterization of sauropod bone structure / Maitena Dumont ... [et al.] -- Finite element analyses and virtual syntheses of biological structures and their application to sauropod skulls / Ulrich Witzel ... [et al.] -- Walking with the shoulder of giants: biomechanical conditions in the tetrapod shoulder girdle as a basis for sauropod shoulder reconstruction / Bianca Hohn -- Why so huge?: biomechanical reasons for the acquisition of large size in sauropod and theropod dinosaurs / Holger Preuschoft ... [et al.] -- Plateosaurus in 3D: how CAD models and kinetic-dynamic modeling bring an extinct animal to life / Heinrich Mallison -- Rearing giants:

kinetic-dynamic modeling of sauropod bipedal and tripodal poses / Heinrich Mallison -- Neck posture in sauropods / Andreas Christian and Gordon Dzemski -- The life cycle of sauropod dinosaurs / Eva Maria Griebeler and Jan Werner -- Sauropod bone histology and its implications for sauropod biology / P. Martin Sander ... [et al.] -- Skeletal reconstruction of *Brachiosaurus brancai* in the Museum für Naturkunde, Berlin: summarizing 70 years of sauropod research / Kristian Remes ... [et al.].

Sommario/riassunto

Sauropods, those huge plant-eating dinosaurs, possessed bodies that seem to defy every natural law. What were these creatures like as living animals and how could they reach such uniquely gigantic sizes? A dedicated group of researchers in Germany in disciplines ranging from engineering and materials science to animal nutrition and paleontology went in search of the answers to these questions. *Biology of the Sauropod Dinosaurs* reports on the latest results from this seemingly disparate group of research fields and integrates them into a coherent theory regarding sauropod gigantism. Covering
