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Nota di contenuto	Preface -- Chapter 1. Introduction: The trophic system: a complex tool in a complex world -- Part I. Overview: from structure to behavior -- Chapter 2. Feeding, function, and phylogeny: status-of-the-art on biomechanics and form-function relationships in vertebrates -- Chapter 3. What does the mechanics of the skeleton tell us about evolution of form and function in vertebrates? -- Chapter 4. Food capture in Vertebrates: a complex integrative performance of the cranial and postcranial systems -- Chapter 5. Transitions from water to land: terrestrial feeding in fishes -- Chapter 6. The evolution of the hand as a tool in feeding behavior: the multiple motor channel theory

of reaching -- Part II. Anatomy, Biomechanics and Behavior in chordate and vertebrate lineages -- Chapter 7. Feeding in jawless fishes -- Chapter 8. Feeding in cartilaginous fishes: An interdisciplinary synthesis -- Chapter 9. Functional Morphology and Biomechanics of Feeding in Fishes -- Chapter 10. Evolutionary specialization of the tongue in vertebrates: structure and function -- Chapter 11. Tetrapod Teeth: Diversity, Evolution, and Function -- Chapter 12. Feeding in amphibians: evolutionary transformations and phenotypic diversity as drivers of feeding system diversity -- Chapter 13. Feeding in lizards: form –function and complex multifunctional system -- Chapter 14. Feeding in snakes: form, function, and evolution of the feeding system -- Chapter 15. Feeding in crocodylians and their relatives: functional insights from ontogeny and evolution -- Chapter 16. Feeding in turtles: understanding terrestrial and aquatic feeding in a diverse but monophyletic group -- Chapter 17. Feeding in Birds: Thriving in Terrestrial, Aquatic, and Aerial Niches -- Chapter 18. F Feeding in mammals: comparative, experimental and evolutionary insights on form and function -- Chapter 19. Feeding in Aquatic Mammals: An Evolutionary and Functional Approach -- Chapter 20. Evolution, constraint and optimality in primate feeding systems -- Chapter 21. The Masticatory Apparatus of Humans (*Homo sapiens*): Evolution and Comparative Functional Morphology.

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### Sommario/riassunto

This book provides students and researchers with reviews of biological questions related to the evolution of feeding by vertebrates in aquatic and terrestrial environments. Based on recent technical developments and novel conceptual approaches, the book covers functional questions on trophic behavior in nearly all vertebrate groups including jawless fishes. The book describes mechanisms and theories for understanding the relationships between feeding structure and feeding behavior. Finally, the book demonstrates the importance of adopting an integrative approach to the trophic system in order to understand evolutionary mechanisms across the biodiversity of vertebrates.

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