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GENETIC ANALYSES: THE AFROTHERIA; Preliminary molecular and biochemical studies of sirenian affinities; Genetic and cytogenetic evidence of sirenian affinities within the Superorder Afrotheria; DIVERGENCE AND CHARACTERS OF THE EARLIEST SIRENIA AND THEIR CLOSEST RELATIVES; THE FOSSIL SIRENIA; The Prorastomidae and Pezosiren: the quadrupedal sirenians; The Protosirenidae; The Dugongidae; Halitheriinae; Dugonginae; Hydrodamalinae The Trichechidae Miosireninae; Trichechinae; Molecular genetics suggests additional complexities in manatee evolution; SIRENIAN DIVERSITY THROUGH TIME: ECOLOGY OF CO-EXISTING SPECIES AND SERIAL REPLACEMENTS; Premises about the ecological and evolutionary capacities of sirenians; Co-existing species and serial replacements in the Caribbean Sea and western Atlantic Ocean; Eocene sirenians in the Caribbean Sea and western Atlantic Ocean; Oligocene sirenians in the Caribbean Sea and western Atlantic Ocean; Miocene sirenians in the Caribbean Sea and western Atlantic Ocean Pliocene sirenians in the Caribbean Sea and western Atlantic Ocean Co-existing species and serial replacements in the North Pacific Ocean; CONCLUSIONS; NOTES; 4: Feeding biology; OPTIMAL FORAGING THEORY; FEEDING STYLE; FOODS; Methodology; Dugongs; Amazonian manatee; West Indian manatee; West African manatee; FOOD ATTRIBUTES; Plant biomass and productivity; Food quality; Nitrogen and protein; Water-soluble carbohydrates and starch; Structural carbohydrate and fibre; Secondary compounds; Minerals; Water content; In vitro dry matter digestibility; FOOD ACQUISITION AND PROCESSING; Food acquisition Mastication Digestion; Food consumption; SIRENIAN-PLANT INTERACTIONS; Effects on the food plant community; Microbial processes and detritus; Plant biomass and productivity; Plant community structure and composition; Food quality; Benthic animals; Recovery of plant communities; Feeding optimisation?; Competition with green turtles; Manatees and aquatic weed clearance; COMPARATIVE OVERVIEW AND IMPLICATIONS FOR CONSERVATION; SUGGESTIONS FOR FUTURE RESEARCH; NOTE; 5: Behaviour and habitat use; INTRODUCTION; INDIVIDUAL BEHAVIOUR; Sensation and perception; Audition; Tactile senses; Vision Chemoreception

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Sommario/riassunto

Dugongs and manatees, the only fully aquatic herbivorous mammals, live in the coastal waters, rivers and lakes of more than 80 subtropical and tropical countries. Symbols of fierce conservation battles, sirenian populations are threatened by multiple global problems. Providing comparative information on all four surviving species, this book synthesises the ecological and related knowledge pertinent to understanding the biology and conservation of the sirenia. It presents detailed scientific summaries, covering sirenian feeding biology; reproduction and population dynamics; behavioural ecology; habitat requirements and threats to their continued existence. Outlining the current conservation status of the sirenian taxa, this unique study will equip researchers and professionals with the scientific knowledge required to develop proactive, precautionary and achievable strategies to conserve dugongs and manatees. Supplementary material is available online at: [www.cambridge.org/9780521888288](http://www.cambridge.org/9780521888288).

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