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Nota di contenuto	Cover; Table of Contents; Preface; Acknowledgements; Introduction-a biology lesson from the bats; 1. Evolution and diversity; Evolution; Classification and the distribution and diversity of bats; Yinpterochiroptera; Yangochiroptera; Adaptive radiation-why are the Phyllostomidae so numerous and so diverse?; 2. Flight; Some basic aerodynamics: aerofoils and flapping flight; The evolution of flight; The advantages of flight and the demands on the flyer: physiological and biomechanical aspects of flight; The wing and what it does in flight; Ecological aspects of flight 3. Echolocation and other sensesWhat is echolocation?; Sound generation and perception in echolocating bats; Echolocation calls; How do bats avoid being confused by other bats' sonar?; Auditory adaptations and the neural basis of echolocation; Echolocation and behavioural studies in the wild; The cost of echolocation and its consequences; Other senses; The ecology of echolocation: interactions between flight, food, and foraging habits; Evolution of echolocation; 4. Torpor and hibernation; Energy balance; Concepts: ectothermy, endothermy, and heterothermy; Concepts: torpor and hibernation The cost of staying warm-the importance of body sizeThe physiology of torpor; The ecology of torpor and hibernation; Biological clocks; Evolution of torpor and hibernation; 5. Reproduction and development;

Reproductive cycles; Gestation; Birth, development, and survival; Infant-mother communication and maternal care; Roost selection and maternal foraging patterns; Mating behaviour; 6. Roosting and feeding ecology; Roosting ecology; Feeding ecology; Information transfer; Interactions between habitat, food, foraging, social structure, and behaviour
7. Migration, social structure, and population structureMigration; Navigation; Social and population structure; 8. Biogeography, macroecology, community ecology, and the interactions between bats and other organisms; Biogeography and macroecology; Community ecology; Predators and prey; 9. Conservation; Why conserve bats?; An overview of current status; Identifying and predicting conservation needs; Threats to bats; From the negative to the positive: how to conserve bats; Bat conservation organizations; References; Index; A; B; C; D; E; F; G; H; I; K; L; M; N; O; P; Q; R; S; T; U; V; W; Y

Sommario/riassunto

Bats are highly charismatic and popular animals that are not only fascinating in their own right, but illustrate most of the topical and important concepts and issues in mammalian biology. This book covers the key aspects of bat biology, including evolution, flight, echolocation, hibernation, reproduction, feeding and roosting ecology, social behaviour, migration, population and community ecology, biogeography, and conservation. This new edition is fully updated and greatly expanded throughout, maintaining the depth and scientific rigour of the first edition. It is written with infectious enth