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Nota di contenuto	Cover; FOREWORD; Contents; PREFACE; ACKNOW LEDGEMENTS; 1 INTRODUCTION; Introducing crocodylians; The three 'families': Crocodylidae, Alligatoridae and Gavialidae; Differences between crocodylids, alligatorids and gharials; Terminology; The living species ofcrocodylians; Recent taxonomic changes in African Crocodyles; The growth of scientific knowledge about crocodylians; Beginnings; More recent research; Crocodylians as research subjects; Body size and age; Crocodylians large and small; Relationships between length and mass; How long do crocodylians live?; 2 THE CROCODYLIAN FAMILY TREE The modern crocodylians and their relationshipsExtant Crocodylia; Affinities between species within Crocodylidae; Affinities between species within Alligatoridae; The affinity of the Malay or false Gharial, Tomistoma schlegelii; Extinct Crocodylia and other crocodile-like reptiles; crocs in 'deep time'; Amniotes, synapsids, reptiles, anapsids and diapsids; The earliest 'Archosaurs', Archosauriformes; Archosaurs; two major clades, Crurotarsi (Pseudosuchia) and Avemetatarsalia (Ornithodira); Crurotarsan diversification in the early Triassic: the earliest crocodile-like reptiles

Basal crocodylomorphsCrocodyliformes (excluding Eusuchia); Non-eusuchian Mesoeucrocodylia; Bernissartia and extinct Eusuchia (including extinct Crocodylia); Summary; 3 CROCODYLIANS CLOSER UP; The external features of crocodylians; Body and limbs; Skin and scales; Skin colour; Bony armour; Head; Teeth; Integumentary sense organs (ISOs); Skin glands; Skull and musculoskeletal system; Skull and jaws; Opening and closing the jaws; Vertebrae and vertebral column; Neck: supporting a heavy head; Trunk musculature: analogy with an I-beam; Trunk: ribs and gastralia; Tail: the crocodylian propeller Forelimbs and pectoral girdleHindlimbs and pelvic girdle; 4 LOCOMOTION, BUOYANCY AND TRAVEL; Crocodylians on land; Gaits on land; Crocodylians in the water; Typical postures at rest in water; Swimming; Jumping and 'tail walking'; Diving; Bottom walking; Surfacing to breathe; Head and tail lift; Buoyancy; Behaviours that depend on good buoyancy control; Mechanisms of buoyancy regulation; Stomach stones(gastroliths); The search for a function; What function could the stones serve?; Capacity for long distance travel; 5 SENSORY SKILLS AND BRAIN; Vision Operational aspects, binocularity, vision underwaterAnatomy of the eye; Retinal cells, pigments, colour vision; Night vision, the tapetum lucidum; Hearing, movement and balance; Functional anatomy of the ears and associated sense organs; Hearing sensitivity in air and water in the human audible range; Sub-audible vibrations, infrasound: possible role of the sacculus; Magnetoreception? Possible role of the lagena; Eustachian tubes: for diving and/or sensing direction of sound, or infrasound?; Brain and cranial nerves; Olfaction and gustation (chemosensation); Olfaction (smell) Gustation (taste)

Sommario/riassunto

Biology and Evolution of Crocodylians is a comprehensive review of current knowledge about the world's largest and most famous living reptiles. Gordon Grigg's authoritative and accessible text and David Kirshner's stunning interpretive artwork and colour photographs combine expertly in this contemporary celebration of crocodiles, alligators, caimans and gharials. This book showcases the skills and capabilities that allow crocodylians to live how and where they do. It covers the biology and ecology of the extant species, conservation issues, crocodylian-human interaction and the evolutionary his
