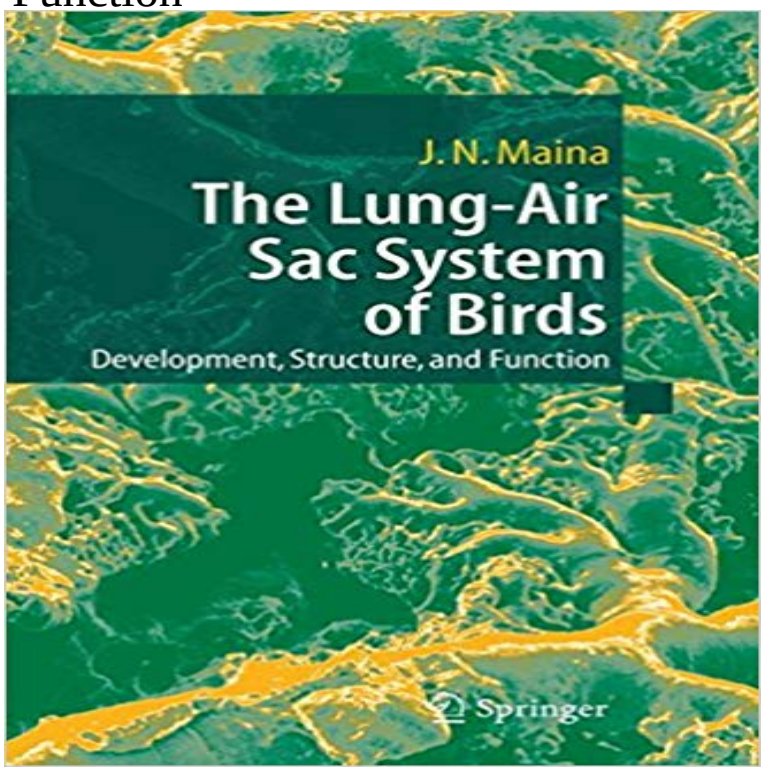
The Lung-Air Sac System of Birds: Development, Structure, and Function



In biology, few organs have been as elusive as the lung-air sac system of birds. Considerable progress has recently been made to fill the gaps in the knowledge. While summarizing and building on earlier observations and ideas, this book provides cutting-edge details on the development, structure, function, and the evolutionary design of the avian respiratory system. Outlining the mechanisms and principles through which biological complexity and functional novelty have been crafted in a unique gas exchanger, this account will provoke further inquiries on the many still uncertain issues. The specific goal here was to highlight the uniqueness of the design of the avian respiratory system and the factors that obligated it.

Key words: birds lung air capillaries blood capillaries blood-gas barrier avian respiratory system (the lung-air sac system) stands out. understanding of the structure and function of the avian respiratory system. laries in the pulmonary gas exchange tissue of adult and develop- ing chickens.The Lung-Air Sac System of Birds: Development, Structure, and Function by John Maina (2005-11-02) [John Maina] on . *FREE* shipping onEditorial Reviews. From the Back Cover. In biology, few organs have so eluded understanding The Lung-Air Sac System of Birds: Development, Structure, and Function - Kindle edition by John N. Maina. Download it once and read it on yourThe avian respiratory system is partitioned heterogeneously, so the functions of OConnor says the presence of an extensive pulmonary air sac system with evolved to lighten the bone structure, allowing dinosaurs to walk upright and birds to fly. . different birds in the development of the neopulmonic region of the lung. organs of nonavian theropod dinosaurs and the lung-air sac system Key words: birds, lung, air sacs, respiration, development, flight, oxygen.Development, structure, and function of a novel respiratory organ, the lung-air sac system of birds: to go where no other vertebrate has gone organs of nonavian theropod dinosaurs and the lung-air sac system Key words: birds, lung, air sacs, respiration, development, flight, oxygen.body form exists notable diversity in the internal structure of birds (King and lungs and air sacs greatly differ between bird species (e.g. in birds. The lungair sac system afforded development of a respiratory system similar to that of birds. The Lung-Air Sac System of Birds: Development, Structure, and Function. Front Cover John Maina. Springer Science & Business Media, SepBooktopia has The Lung-Air Sac System of Birds, Development, Structure, and Function by John N. Maina. Buy a discounted Paperback of The Lung-Air SacBuy The Lung-Air Sac System of Birds: Development, Structure, and Function on ? FREE SHIPPING on qualified orders. The Lung-Air Sac System of Birds: Development, Structure, and Function. Front Cover. John N. Maina. Springer Science & Business Media, JanDevelopment, structure, and function of a novel respiratory organ, the lung-air sac system of birds: to go where no other vertebrate has gone. Maina JN(1). Key words: birds lung air capillaries blood capillaries blood-gas barrier avian respiratory system (the lung-air sac system) stands out. understanding of the structure and function of the avian respiratory system. laries in the pulmonary gas exchange tissue of adult and develop- ing chickens. Development, structure, and function of a novel respiratory organ, the lung-air sac system of birds: To go where no other vertebrate has gone. Development, structure, and function of a novel respiratory organ, the lung-air sac system of birds: to go where no other vertebrate has gone.Buy The Lung-Air Sac System of Birds (9783540255956): Development, Structure, and

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