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About this book

While the respiratory physiologist views living animals as systems of gaseous exchange, the comparative physiologist additionally recognizes that these systems fall into adaptive patterns according to the availability and demand for oxygen. Invertebrates living between the tides, or in mud, or in stagnant water, are subjected to a fluctuating supply of oxygen. Thus the physiologist is provided with a diversity of adaptive solutions to the problem of balancing an animal's metabolic requirements with its accessibility to oxygen.

Whether these solutions appear convergent or unique, selected examples have been used to illustrate fundamental principles of respiratory physiology without an overburden of purely physical or chemical discourse. The problem for the teacher, is to resist the encyclopaedic account of respiratory adaptations and to present examples that reflect recent research trends. In this book, invertebrates are seen not as merely 'lower' animals, but as displaying control and regulatory capabilities which must cope with greater environmental exigencies than those of the vertebrates.



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Enquiries about membership should be addressed to Freepost, Institute of Biology, 41 Queen's Gate, London, SW7 5BR.



Edward Arnold