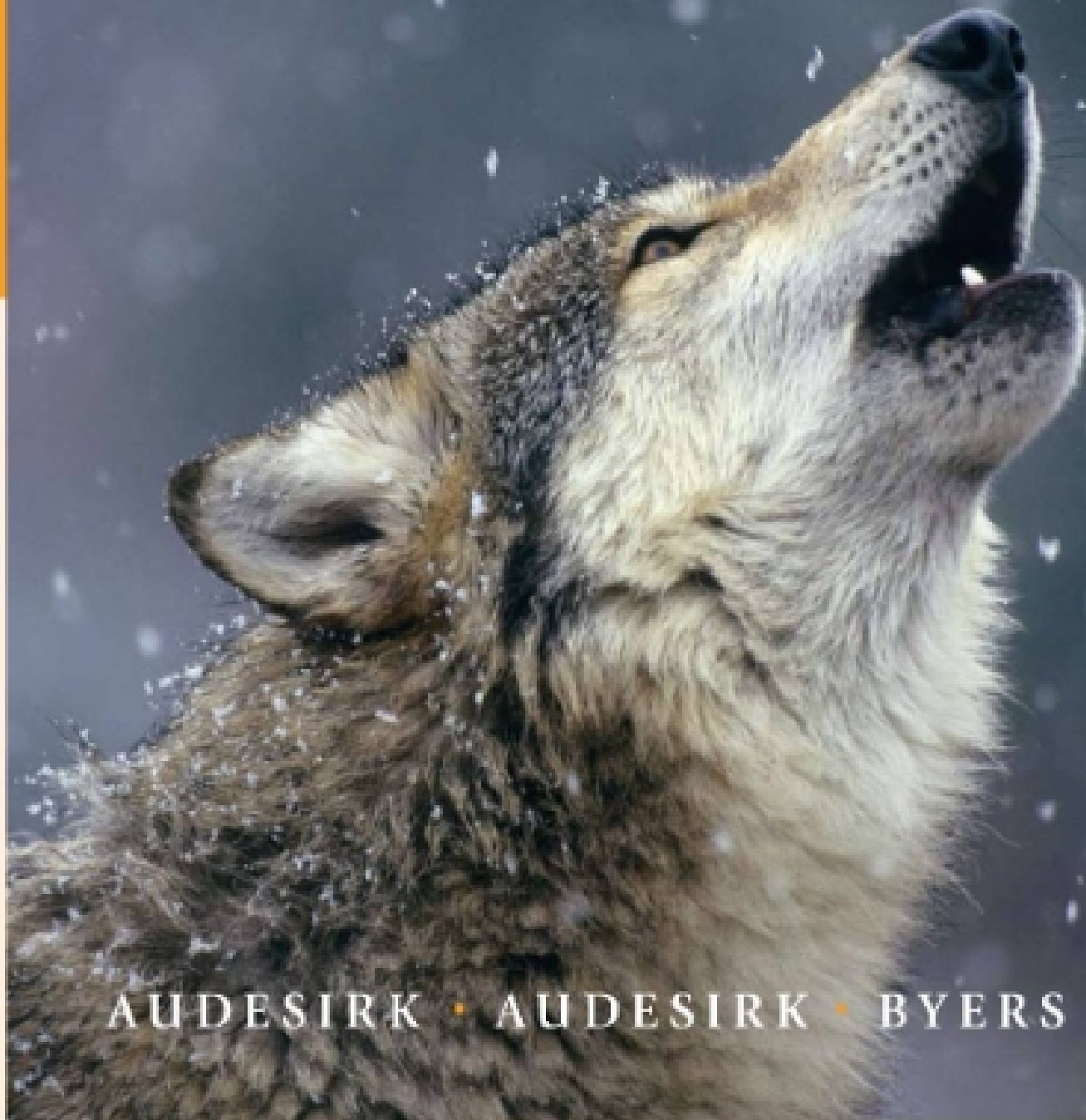


NINTH EDITION

BIOLOGY

LIFE ON EARTH



Chapter 33

Respiration

Lecture Outlines by Gregory Ahearn,
University of North Florida

Chapter 33 At a Glance

- 33.1 Why Exchange Gases?
- 33.2 What Are Some Evolutionary Adaptations for Gas Exchange?
- 33.3 How Does the Human Respiratory System Work?

33.1 Why Exchange Gases?

- The act of breathing is called **respiration**
 - The process of cellular respiration, which converts the energy in nutrients into the ATP used by cells, requires a steady supply of oxygen and generates carbon dioxide as a waste product
 - Consequently, the circulatory system works in close harmony with the respiratory system
 - The circulatory system extracts oxygen from the air in your lungs, carries it within diffusing distance of each cell, and then picks up carbon dioxide for release from the lungs