34. Ecological Communities *(Chapter 53)*

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I. Introduction

# A. Levels of Organization in Biology

B. Ecological Communities / Ecosystems / Biomes

C. Questions Posed by Community and Systems Ecologists

1. Structure and organization

2. Energy and nutrient inputs

3. Energy and nutrient movement

4. Development of communities through time

5. Effects of human disturbances

II. Community Structure *(1261-1267)*

A. Units and Organizing Forces

B. Food Chains and Webs

1. Trophic levels

2. Paths of energy and nutrient movement

III. Community Development *(1268-1274)*

A. Terms and Definitions

1. Ecological succession

2. Climax community

3. Processes regulating changes

B. Succession in an Old Field

1. Colonization by dispersing annuals

2. Establishment of perennials

3. Entry of softwoods

4. Replacement by hardwoods

5. Other successional systems

C. Processes Promoting Succession

1. Dispersal abilities and invasion rates

2. Site modification

D. Ecosystem Changes Associated with Succession

1. Soil development

2. Stratification of vegetation

3. Increased buffering of physical environment

4. Increased biomass and productivity

5. Increased species richness

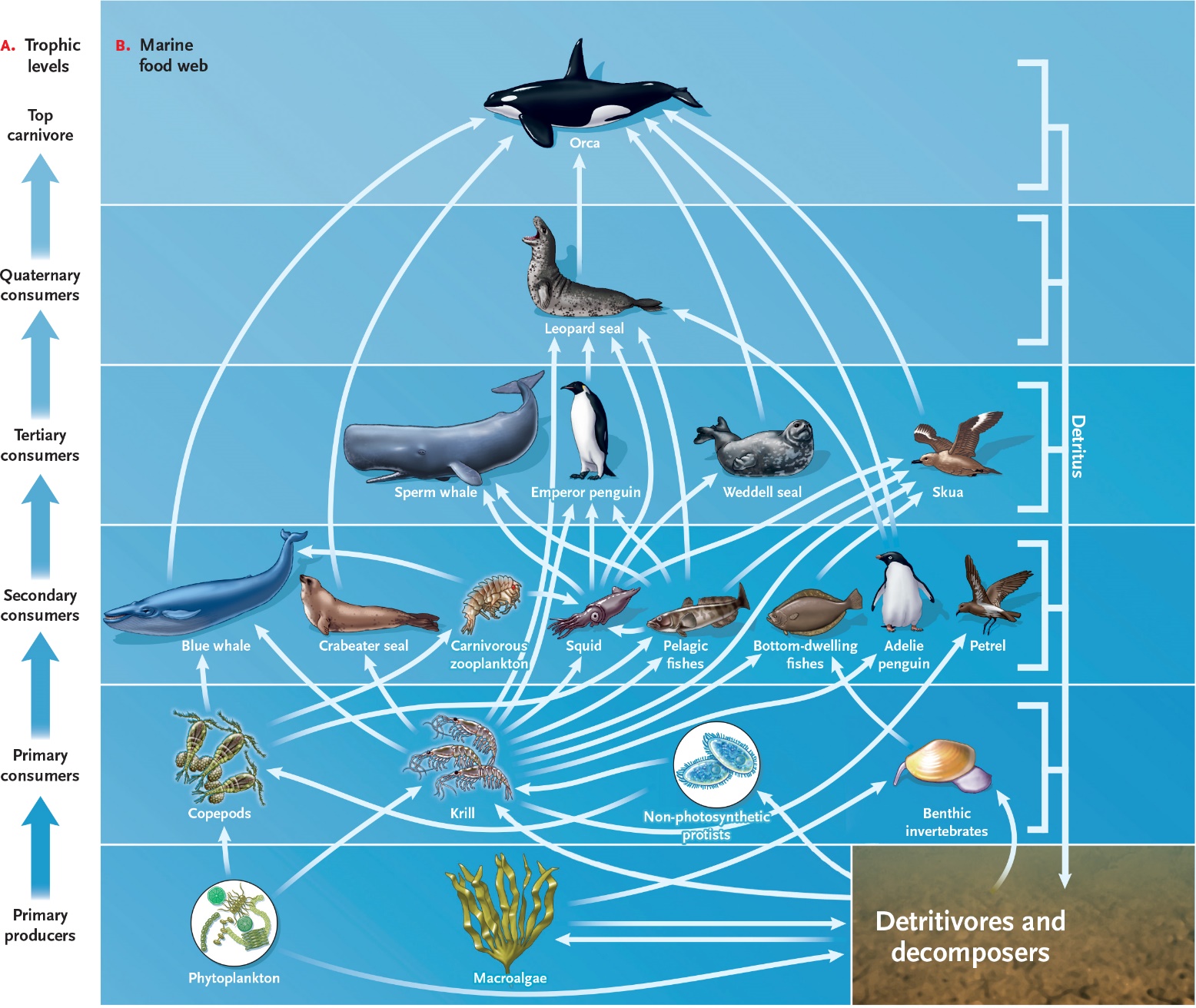
6. Reduced rates of species turnover and increased stability

E. Climax Community

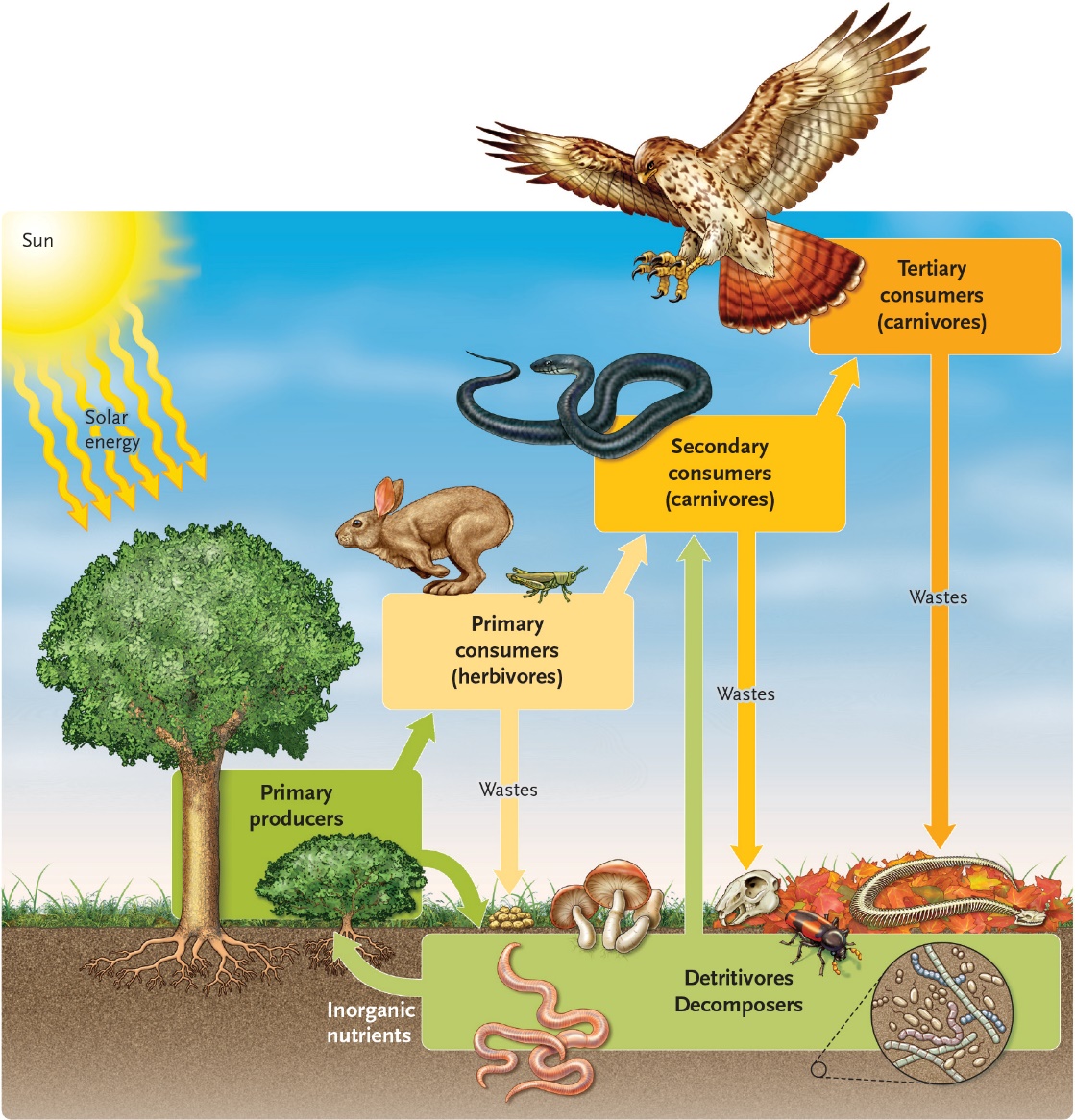
1. Steady state concept

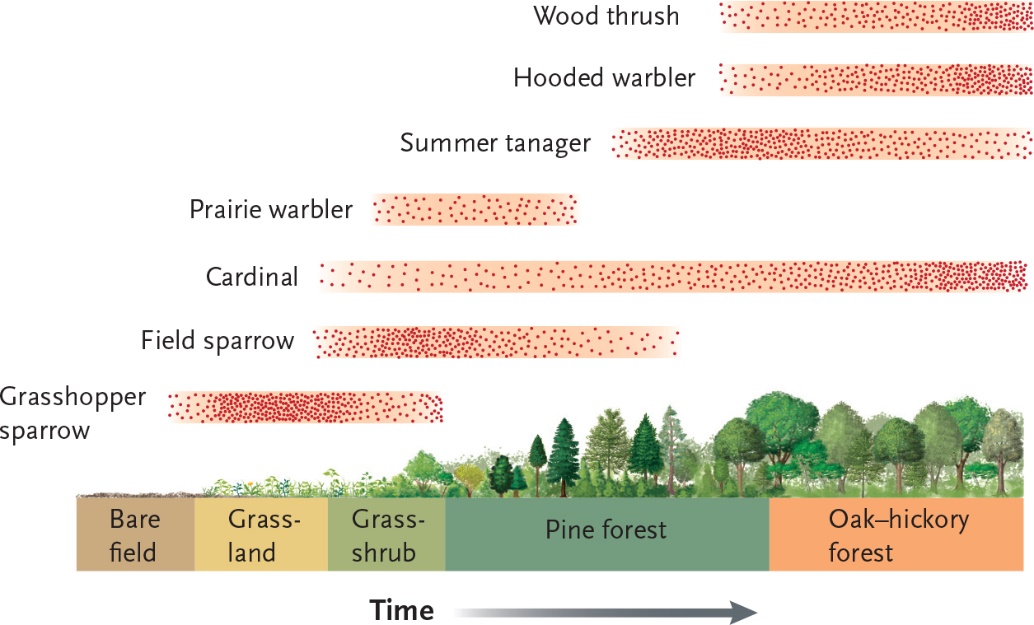
2. Dynamic definition

34-1



34-2





34-3

