The natural world

VOCABULARY PRACTICE

ADVANCED | C1

Name: _____ **Date:** _____

1 Match each advanced ecological concept with its meaning.

1 trophic cascade	____	a delayed future species loss caused by earlier habitat change
2 ecosystem resilience	____	b capacity to absorb disturbance while retaining core functions
3 genetic bottleneck	____	c deliberate movement of organisms beyond their current range
4 functional redundancy	____	d abrupt system change after a critical limit is crossed
5 extinction debt	____	e restoration led by natural processes and ecological interactions
6 ecological threshold	____	f cascading effects across feeding levels after one population changes
7 assisted migration	____	g declining expectations because each generation accepts a more degraded state
8 rewilding	____	h sharp reduction in population size and genetic variation
9 shifting baseline	____	i several species performing similar ecosystem roles
10 source-sink dynamics	____	j interaction between productive populations and those sustained by immigration

2 Complete the analytical collocations.

baseline | bottleneck | cascade | debt | dynamics | migration | redundancy | threshold

1 trigger a trophic _____

2 cross an ecological _____

3 suffer a genetic _____

4 retain functional _____

5 incur an extinction _____

6 debate assisted _____

7 recognise a shifting _____

8 model source-sink _____

3 Choose the concept that best captures the distinction.

1 Wolves reduce deer pressure, allowing trees and birds to recover: *trophic cascade / succession*.

2 Different pollinators can partly replace one another's role: *functional redundancy / genetic diversity*.

3 A tiny surviving population loses many alleles: *genetic bottleneck / carrying capacity*.

4 A wetland reorganises after drought but still regulates floods: *resilience / resistance*.

5 Species disappear decades after forests were divided: *extinction debt / background extinction*.

6 A clear lake suddenly becomes persistently dominated by algae: *ecological threshold / shifting baseline*.

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4 Complete the ecological review with terms from the box.

assisted migration | ecological threshold | ecosystem resilience | extinction debt | functional redundancy | genetic bottleneck | rewilding | shifting baseline | source-sink dynamics | trophic cascade

The review asks whether predator recovery could initiate a **1** _____ and whether reduced management would amount to **2** _____. It tests **3** _____ under fire and drought, while recognising that apparent stability may depend on **4** _____. A rare mammal has passed through a **5** _____. Patch-level models examine **6** _____, and long-term records guard against a **7** _____. Analysts also estimate an **8** _____ from past fragmentation. If warming pushes the system across an **9** _____, managers may consider **10** _____.

5 Read the text and answer the questions concisely.

When restoration success is ambiguous

After livestock were removed, shrubs and young trees spread across a valley. Bird richness increased, yet open-ground specialists declined. Supporters called the project rewilding; critics argued that it merely replaced one valued community with another. Both claims depended on the chosen reference condition, spatial scale and time horizon. A credible evaluation would state those choices explicitly, compare plausible counterfactuals and track ecological functions as well as species counts. It would also distinguish reversible fluctuations from movement towards a threshold beyond which recovery becomes difficult.

1 What changed after livestock removal? _____

2 Which organisms did not benefit? _____

3 Why could both interpretations seem valid? _____

4 What should evaluators state explicitly? _____

5 What should be measured besides species counts? _____

6 What critical distinction should monitoring make? _____

6 Paraphrase using the expression in capitals.

1 Past habitat loss will cause species to vanish later. **DEBT** _____

2 Several species can perform the same ecological role. **REDUNDANCY** ___

3 The damaged system still retains its key functions. **RESILIENCE** ___

4 Productive patches sustain populations in poorer patches. **SOURCE-SINK** ___

OVER TO YOU

Write a **160-190 word** critical evaluation of a restoration or rewilding proposal. Define success, reference conditions, spatial and temporal scales, uncertainties and possible ecological trade-offs.

[ ] Use at least ten target terms or collocations. [ ] State a counterfactual and evaluation scale. [ ] Distinguish species counts from ecosystem function.

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ANSWER KEY

1 Advanced ecological concepts

1 **f** 2 **b** 3 **h** 4 **i** 5 **a** 6 **d** 7 **c** 8 **e** 9 **g** 10 **j**

2 Analytical collocations

1 **cascade** 2 **threshold** 3 **bottleneck** 4 **redundancy** 5 **debt** 6 **migration** 7 **baseline** 8 **dynamics**

3 Conceptual distinctions

1 **trophic cascade** 2 **functional redundancy** 3 **genetic bottleneck** 4 **resilience**
5 **extinction debt** 6 **ecological threshold**

4 Ecological review

1 **trophic cascade** 2 **rewilding** 3 **ecosystem resilience** 4 **functional redundancy** 5 **genetic bottleneck**
6 **source-sink dynamics** 7 **shifting baseline** 8 **extinction debt** 9 **ecological threshold** 10 **assisted migration**

5 Reading - suggested answers

1 Shrubs and young trees spread, and bird richness rose. 2 Open-ground specialists. 3 The claims used different reference conditions, scales or time horizons.
4 Their reference condition, spatial scale and time horizon. 5 Ecological functions. 6 Reversible variation versus movement towards a difficult-to-reverse threshold.

6 Paraphrasing - possible answers

1 The habitat carries an **extinction debt**. 2 The community has **functional redundancy**. 3 The system shows **ecosystem resilience**. 4 This illustrates **source-sink dynamics**.

Over to you: Answers will vary. Check conceptual precision, explicit baselines, counterfactual reasoning and trade-offs.