

## BIODIVERSITY I

### 1. Define biodiversity

### 2. Put the words of the definition in correct order

<b>Biological</b>	<b>organisms</b>	<b>among</b>	<b>living</b>	<b>which</b>	<b>ecological</b>
<b>variety</b>	<b>and</b>	<b>variability</b>	<b>and</b>	<b>they</b>	<b>complexes</b>
<b>is</b>	<b>the</b>	<b>diversity</b>	<b>the</b>	<b>in</b>	<b>occur</b>

### 3. Complete the text with the suitable terms.

A pond ecosystem may consist of a pond \_\_\_\_\_ (*A place where plants, animals and micro-organisms live.*), inhabited by \_\_\_\_\_ (*Members of a single species living in a habitat.*) of aquatic plants, waterside plants, micro-organisms. The organisms together make up a \_\_\_\_\_ (*A group of people, animals and and/or plants that live together in one place. So a \_\_\_\_\_ will be all the biotic (living) factors that make up an ecosystem.* of living things.

4. **Biodiversity can be divided into three hierarchical categories. What are they? Label the descriptions.**

\_\_\_\_\_ **diversity** refers to the **variation of genes within species**. This covers distinct populations of the same species (such as the thousands of traditional rice varieties in India) or genetic variation within a populations (high among Indian rhinos, and very low among cheetahs)...

\_\_\_\_\_ **diversity** refers to the variety of species **within a region**. Such **diversity can be measured** in many ways, and scientists have not **settled on** a single best method. The number of species in a region -- its species "richness" -- is one often- used measure, but a more precise **measurement**, "**taxonomic diversity**", also considers the relationship of species to each other. For example, an island with two species of birds and one species of lizard has a greater taxonomic diversity than an island with three species of birds but no lizards...

\_\_\_\_\_ **diversity** is harder to measure than species or genetic diversity because the "boundaries" of communities -- associations of species -- and ecosystems are elusive. Nevertheless, as long as a consistent **set of criteria** is used to define communities and ecosystems, their numbers and **distribution** can be measured..."

Adapted from: World Resources Institute, World Conservation Union, and United Nations Environment Programme, "Global Biodiversity Strategy," 1992:

## BIODIVERSITY II

### Listening Comprehension: Diversity of Species

[http://www.bbc.co.uk/radio4/science/homeplanet\\_20030715.shtml](http://www.bbc.co.uk/radio4/science/homeplanet_20030715.shtml) (timing 11:16 -15:35)

#### 1. Complete the information on the Amazon Basin project:

object of observation	area	time	costs

#### 2. A lot of species become extinct. Anna believes that essential is whether

- a. we lose one species here and there
- b. the ecosystems continue functioning
- c. hundreds of new species appear

#### 3. Choose the correct answer concerning the Biowatch Project

The project takes place in:

- a. UK
- b. USA
- c. rainforest

People taking part in the observation are:

- a. scientists
- b. volunteers
- c. students

The most important contribution of the project is:

- a. it will help us to solve the problem with the huge extinction
- b. it provides detailed observations of how species are distributed
- c. the public is involved in the biodiversity management

#### Post-listening:

1. Have you heard of similar projects focusing on biodiversity in the Czech Republic?  
Would you like to take part in a project like this?

### BIODIVERSITY III

1. The title of the article is “Biological Diversity under Attack”. Brainstorm a list of key words that may appear in the text.
2. Underline the key words in the main ideas of the passage in question. Then list as many synonyms as possible. (see Main Idea Check)
3. Identify the paragraphs by scanning the text. Write the correct paragraph number beside its main idea.

Scanning technique:

1. decide what information is needed
2. draw up a list of possible key words (including synonyms) which may occur in the text referring to question topic
3. scan for instances of key words
4. read carefully those sentences and/or paragraphs where the keywords occur and decide if the information is relevant
5. repeat steps 3) and 4) until all relevant information is available

5. Answer the questions on the article (see A Closer Look)

This section is based on *Pakenham, J. Making Connections, CUP, 1998*

## BIODIVERSITY IV

- 1. Listen to the BBC piece of news (February 2006) and try to identify the topic. Listen again and note down whatever you can catch. The file is available in “osnova” (species-Papua2-06MP3)**
- 2. The title and the first paragraph of the article have been removed. In three minutes try to identify the key topic.**
- 3. Compare with your ‘listening notes’.**
- 4. Listen again and complete your notes.**
- 5. Now check what you have grasped – see reverse side of this page - and formulate the key idea in your own words (writing).**
- 6. Scan the whole article and find answers to the following questions.**
  - Who has made the discovery?
  - Where did it take place?
  - How much time did the research team spend in that area?
  - How did they get there?
  - Had the local people been to that place before?
  - Why is the discovery so important?
- 7. Translate the underlined parts.**



Title: New species found in Papua 'Eden'

Introductory paragraph: An international team of scientists says it has found a "lost world" in the Indonesian jungle that is home to dozens of new animal and plant species.

Title .....	
<p><b>Introductory paragraph</b>.....</p> <p>"It's as close to the Garden of Eden as you're going to find on Earth," said Bruce Beehler, co-leader of the group.</p> <p>The team recorded new butterflies, frogs, and a series of remarkable plants that included five new palms and a giant rhododendron flower.</p> <p>The survey also found a honeyeater bird that was previously unknown to science.</p> <p>The research group - from the US, Indonesia and Australia - trekked through an area in the mist-shrouded Foja Mountains, located just north of the vast Mamberamo Basin of north-western (Indonesian) New Guinea.</p> <p><u>The researchers spent nearly a month in the locality, detailing the wildlife and plantlife</u> from the lower hills to near the summit of the Foja range, which reaches more than 2,000m in elevation.</p> <p>"It's beautiful, untouched, unpopulated forest; <u>there's no evidence of human impact or presence up in these mountains</u>," Mr Beehler told the BBC News website.</p> <p>"We were dropped in by helicopter. There's not a trail anywhere; it was really hard to get around."</p> <p>He said that even two <u>local indigenous groups</u>, the Kwerba and Papasena people, customary landowners of the forest who accompanied the scientists, were astonished at the area's isolation.</p> <p>Mr Beehler said some of the creatures the team came into contact with <u>were remarkably unafraid of humans</u>.</p> <p>Two long-beaked echidnas, primitive <u>egg-laying mammals</u>, even allowed scientists to On only the second day of the team's expedition, the amazed scientists watched as a male Berlepsch's bird of paradise</p>	<p>pick them up and bring them back to their camp to be studied, he added.</p> <p>The December 2005 expedition was organised by <u>the US-based organisation Conservation International</u>, together with the Indonesian Institute of Sciences.</p> <p>The team says it did not have nearly enough time during its expedition to <u>survey the area completely</u> and intends to return later in the year.</p> <p>The locality lies within a protected zone and Mr Beehler believes its future is secure in the short term.</p> <p>"The key investment is the local communities. Their knowledge, appreciation and oral traditions are so important. They are the forest stewards who will look after these assets," Mr Beehler told the BBC.</p> <p>"The men from the local villages came with us and they made it clear that no one they knew had been anywhere near this area - not even their ancestors," Mr Beehler said.</p> <p><b>Unafraid of humans</b></p> <p>One of the team's most remarkable discoveries was a honeyeater bird with a bright orange patch on its face - <u>the first new bird species to be sighted on the island of New Guinea in more than 60 years</u>.</p> <p>The researchers also solved a major ornithological mystery - the location of the homeland of Berlepsch's six-wired bird of paradise.</p> <p><u>First described in the late 19th century through specimens collected by indigenous hunters from an unknown location on New Guinea, the species had been the focus of several subsequent expeditions that failed to find it.</u></p> <p>A summary of the team's main discoveries:</p> <ul style="list-style-type: none"> <li>• A new species of honeyeater, the first new bird species discovered on</li> </ul>



performed a mating dance for an attending female in the field camp.

It was the first time a live male of the species had been observed by Western scientists, and proved that the Foja Mountains was the species' true home.

"This bird had been filed away and forgotten; it had been lost. To rediscover it was, for me, in some ways, more exciting than finding the honeyeater. I spent 20 years working on birds of paradise; they're pretty darn sexy beasts," Mr Beehler enthused.

The team also recorded a golden-mantled tree kangaroo, which was previously thought to have been hunted to near-extinction.

Story from BBC NEWS:

<http://news.bbc.co.uk/go/pr/fr/-/2/hi/science/nature/4688000.stm>



the island of New Guinea since 1939

- The formerly unknown breeding grounds of a "lost" bird of paradise - the six-wired bird of paradise ( *Parotia berlepschi* )
- First photographs of the golden-fronted bowerbird displaying at its bower.
- A new large mammal for Indonesia, the golden-mantled tree kangaroo ( *Dendrolagus pulcherrimus* )
- More than 20 new species of frogs, including a tiny microhylid frog less than 14mm long
- A series of previously undescribed plant species, including five new species of palms
- A remarkable white-flowered rhododendron with flower about 15cm across
- Four new butterfly species



excess	/ɪk'ses, 'ekses/
extinction	/ɪk'stɪŋkʃən/
unprecedented	/ʌn'presɪdəntɪd/
susceptible	/sə'septəbəl/
resistance	/rɪ'zɪstəns/
domesticated	/də'mestɪ'keɪtɪd/
medicinal	/mɪ'dɪsənəl/
irreplaceable	/,ɪrɪ'pleɪsəbəl?lt/
diversity	/daɪ'vɜ:sɪti, dʒə- \$ -sɪr-/
preserve	/prɪ'zɜ:v \$ -sɪrv/
halt	/hɔ:lt \$ hɒ:lt/
cautious	/'kɔ:ʃəs \$ 'kɒ:-/
address	/ə'dres \$ ə'dres, 'ædres/
reserve	/rɪ'zɜ:v \$ -sɪrv/
exploitation	/,eksplɔɪ'teɪʃən/
insufficient	/,ɪnsə'fɪʃənt?lt/
effective	/ɪ'fektɪv/
exceeds	/ɪk'si:d/

Sources:

[http://www.bbc.co.uk/schools/gcsebitesize/science/ocr\\_gateway/environment/0\\_ecology\\_organisms1.shtml](http://www.bbc.co.uk/schools/gcsebitesize/science/ocr_gateway/environment/0_ecology_organisms1.shtml)

<http://en.wikipedia.org>

[http://biodiversity.ca.gov/Biodiversity/biodiv\\_def2.html](http://biodiversity.ca.gov/Biodiversity/biodiv_def2.html)

Pakenham, J. Making Connections, CUP, 1998