

### INTRODUCTION

The African Black Oystercatcher (Oyks) is listed as a species of *Least Concern* in the IUCN Red Data List, but this doesn't mean that Oyks aren't rare. There are approximately just as few Oyks left as Black Rhinos! Their rarity is not noticed by many because they are frequently seen on our shores – Black Rhinos live in protected areas and in thick vegetation whereas Oyks live in the open. Oyks entire lives are restricted to a thin strip of coastline along South Africa and Namibia, occurring only as vagrants in limited areas of Angola and Mozambique. The summer holiday, when thousands of beach-goers share their habitat, overlap with their breeding season.

Oyks are at risk from all sort of human activities, from pollution and coastal development, to disturbance by man, his pets and his toys. Oyk behaviour unfortunately, also makes them more vulnerable. They tend to return to the same breeding territory year after year, even if it's not suitable – some pairs have been known to stay in the same territories for nearly 20 years! Oyks are vulnerable to predation so they tend to choose areas where predators are few, which sometimes also means areas where there is less food. Their nests are easily trampled because they make them on bare scrapes on the ground, trying their best to choose either areas that are well camouflaged or raised areas where they can see approaching danger. Unfortunately, any disturbance, natural or man-made, will cause them to leave their nests for short periods, causing the eggs to overheat in the sun or the chicks to become vulnerable to predation.

Over the years, conservation efforts have managed to protect Oyks from certain disturbances by placing beach nesting signs close to nests to create awareness or by demarcating areas for safe breeding free of human disturbance. There are however, many threats which are now being addressed by conservation bodies such as BirdLife South Africa and the Nature's Valley Trust.

## VOCABULARY

**Breeding:** the mating and production of offspring by animals.

**Camouflage:** in this case, the use of colouration and patterns to make their eggs hard to see.

**Coastal Development:** human activities that include construction of buildings and mining in coastal areas.

**Demarcating:** in this case, putting something visible (like tape) around breeding areas so that people won't walk over a nesting area.

**Habitat:** natural environment in which an organism lives.

**Human Disturbance:** threats from human activities that alter, destroy and disturb habitats for the species living in it.

**Pollution:** harmful man-made objects or substances that do not belong in the natural environment.

**Predation:** the preying of one animal on another e.g. caracal eats chicks.

**Territory:** the area that a breeding pair actively defend from other birds of the same kind.

**Vagrant:** a bird that has strayed or have been blown away from its usual range or migratory route.

**Vulnerable:** easily affected by outside disturbances that make them less effective at breeding and that can lead to lower population numbers.

## AIM AND PURPOSE OF LESSON

The aim of this lesson plan is to introduce students to the threats to African Black Oystercatchers. The purpose is for students to learn about these threats and to consider for themselves how these threats can be addressed by conservation entities and how they personally can contribute towards the future of Oyks.

## DURATION OF LESSON

Approximately 60 to 80 minutes

## MATERIALS NEEDED

All material (except the videos) are downloadable from the BirdLife South Africa website: <http://www.birdlife.org.za/documents/bird-of-the-year>

The teacher will need:

1. Lesson Plan 2 – *Threats to African Black Oystercatchers* (downloadable from the BirdLife Website <http://www.birdlife.org.za/documents/bird-of-the-year>).
2. A computer with internet connection to view the suggested videos.
3. Fact Sheet 2 - *Threats to African Black Oystercatchers* (downloadable from the BirdLife Website <http://www.birdlife.org.za/documents/bird-of-the-year>).
4. Video 1: *The African Black Oystercatcher* by Big Fish School of Digital Filmmaking (6:43 min) <https://youtu.be/8j8Nh9AC4cY>
5. Video 2: *Protect Beach-nesting Birds* (1:53 min) <https://youtu.be/q5q9D3pYJUw>
6. OPTIONAL – projector and sound system to watch the videos.
7. Answer Sheets 1 Appendix A (found at the end of this lesson plan).

8. Questionnaire 1 Appendix B (found at the end of this lesson plan).
9. OPTIONAL - *Oyks Scramble and Hide* game. The class will be divided in groups with maximum 6 students in each group. Print out enough games to allow each group to have two copies.

The Students will need:

1. Fact Sheet 2 - *Threats to African Black Oystercatchers*.
2. Questionnaires 1 in Appendix B (found at the end of this lesson plan).
3. OPTIONAL - *Oyks Scramble and Hide* game.
4. Pen and paper (OPTIONAL – Pencil and erasure for the game).

## OBJECTIVES AND OUTPUTS

The student will:

- Discuss what they already know about threats to Oyks.
- Watch the videos about threats to Oyks.
- Read up on Oyk threats in the Fact Sheet.
- Discuss what they have learned from the videos and reading material in their allocated groups.
- Learn more about threats to Oyks while playing *Oyks Scramble and Hide*.
- Report back to the teacher in their allocated groups.
- Have a better understanding of threats to Oyks.
- Come up with possible solutions to threats to Oyks.

## PROCEDURE

1. [Duration 4 min] The teacher should read through the introduction of this lesson plan (Lesson Plan 2) to prepare for the lesson. [OPTIONAL] The teacher (or students) can also choose to read the introduction to the class, but this is not necessary.
2. [Duration 5 min] Begin the lesson with an entry task where students must think and discuss what they think the threats are to Oyks. Ask the following questions to the whole class and give them a few opportunities to raise their hands and answer the questions (it is not important that they get the answers right at this stage):
  - a. What natural threats are there to Oyks?
  - b. Can you think of ways humans can threaten Oyks?
  - c. What do you think your dog will do if it sees an Oyk?
  - d. Do you think the threats to Oyks will also affect other shorebirds? How?
5. [Duration 6 min] Divide the students into discussion groups of 4 – 6 students and hand out to each group Fact Sheet 2: *Threats to African Black Oystercatchers*. Allow them 5 minutes to read through the Fact Sheet and discuss it amongst themselves.
6. [Duration 7 min] Set up the projector / TV / computer and watch Video 1: *The African Black Oystercatcher*. As they watch, ask them to focus on the following, keeping in mind what they have learned from the Fact Sheet:
  - a. Try to remember all the threats mentioned in this video.
  - b. What projects and efforts are made to counter these threats.
  - c. Try to remember the names of the people in this video and who they work for.

3. [Duration 5 min] In their groups, allow the students 5 minutes to discuss what they have learned and remembered from the video. Ask them to write down what they remembered and discussed.
4. [Duration 15 min] Use Answer Sheet 1 to ask the students specific questions based on the video or hand out Questionnaire 1 and give them 15 minutes to answer the questions in their groups or individually.
7. [Duration 2 min] Watch Video 2: *Protect Beach-nesting Birds*. This video covers some of the topics that are represented in the optional game they can play after the video. As they watch, ask them to focus on the following, keeping in mind what they have learned from the Fact Sheet (answers in blue):
  - a. What are the threats mentioned in this video? *Some shorebirds nest in the sand and raise their chicks on the beach – eggs and chicks risk being trampled by beach-goers and run over by vehicles. When adults are chased from their nests, eggs and chicks are vulnerable to heat and predators.*
  - b. How can we share the shores with shorebirds? *Watch where you step for camouflaged chicks and eggs. Pay attention to signs and stay away from nesting areas. Don't feed gulls which are natural predators to chicks. Keep dogs on a leash. Dogs can be fatal to adult birds eggs. Heed the signals; when birds dive bomb, they are protecting their nests and chicks. Dispose of fishing line properly. Entangled birds may be injured or killed. Stay near the water and away from dunes to avoid conflict with beach nesters. In beaches where birds are nesting, keep a distance of 50 meters.*
5. OPTIONAL [Duration 20 – 30 min] *Oyks Scramble and Hide* game. The game represents the battle Oyks have on a daily basis to protect their nests from predators and human disturbances. Depending on how many students there are, either let the students battle it out individually or divide them in small groups (max 3). Print out a copy of the game for each player or group.
6. OPTIONAL [Duration 5 min] After the class has played *Oyks Scramble and Hide*, ask the following question (answers in blue):
  - a. How similar is this game to what happens to Oyks in reality? How is it similar? *Oyks are alert and use egg camouflage and distraction to protect their eggs and offspring, but with humans this strategy doesn't work. Beach goers don't always pay attention to their presence. The cautious approach of Oyks cause them to leave their nest when they are disturbed and as a result, their eggs are often exposed to extreme heat for too long. Therefore, with indirect human disturbance, the breeding success of Oyks are affected differently depending on how often and for how long they are disturbed. Consequently, it does not always lead to clutch failure or the death of chicks. Predation almost always end with eggs being destroyed or chicks being killed, especially so if the nest is left unattended because of human disturbance.*
7. [Duration 5 min] Lastly, allow the students to go back to their seats and end the lesson by asking the same questions that was asked in the beginning of the lesson (possible answers in blue):
  - a. What natural threats are there to Oyks? *Disease, flooding, natural predators, red tides.*
  - b. Can you think of ways humans can threaten Oyks? *Dogs off leash, pollution, alien predators, development, off-road vehicles, people on the beach.*

- c. What do you think your dog will do if it sees an Oyks? *It will chase it and possible trample the chicks and eggs.*
- d. Do you think the threats to Oyks will also affect other shorebirds? How? *Yes, other shorebirds like White-fronted Plovers and Damara Terns also breed on the beach and are sensitive to human disturbance. Other birds like Kelp Gulls and Sanderlings are regularly chased by dogs or disturbed from their feeding by human activity.*

## APPENDIX A

### ANSWER SHEET 1: THREATS TO THE AFRICAN BLACK OYSTERCATCHER

- 1. What do African Black Oystercatchers eat? Which answer is wrong?**
  - a) Limpets
  - b) Mussels
  - c) Oysters
- 2. Can chicks feed themselves? Give a reason for your answer.**

Chicks need their parents to bring them food because their bills are not strong enough yet to pry open the shells of limpets and mussels.
- 3. How many adult Oyks are there approximately? Choose the right answer.**
  - a. 2 500
  - b. 1 000
  - c. 10 000
  - d. 5 000
- 4. Inconsiderate fishermen leave fishing line and other waste behind. How does this effect Oyks and other shorebirds?**

It causes strangulation and entanglement of adults causing death and interferes with feeding.
- 5. Oyks mainly feed on the coast and have nowhere else to go. Why is it a problem that humans gravitate toward the coast as well; how does it affect Oyks feeding and breeding?**

Oyks have a strict time budget of when they can feed (only during low tide) and if they can't get food their chicks starve. This is difficult if large amounts of people constantly disrupt their feeding.
- 6. How does Red Tide poisoning affect Oyks?**

Red Tide is a bloom of plankton that, under certain circumstances, release toxins which are then filtered by filter feeders like mussels. Oyks can't read the warning signs humans put up to warn other humans. When they eat the poisoned mussels, they in turn get sick and die.
- 7. How did Grotto Bay Nature Reserve help the conservation of the Oyks?**

The reserve created safe habitats for birds to breed in. They assisted specialist researchers to monitor the birds and their nests. They placed signs around the nests to point them out to people.
- 8. What natural predator did Gerald Crisp find that destroyed 3 nests.**

A porcupine ate eggs from 3 nests.
- 9. What was banned from beaches that helped protect eggs and chicks?**

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## APPENDIX B

### QUESTIONNAIRE 1: THREATS TO THE AFRICAN BLACK OYSTERCATCHER

1. What do African Black Oystercatchers eat? Which answer is wrong?
  - d) Limpets
  - e) Mussels
  - f) Oysters
  
2. Can chicks feed themselves? Give a reason for your answer.
  
  
  
  
  
  
  
  
  
  
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9. What was banned from beaches that helped protect eggs and chicks?