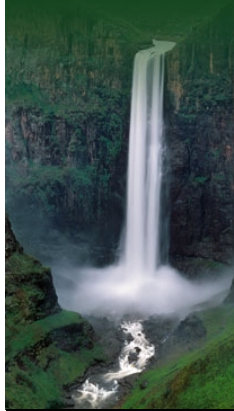




# Orange-Senqu River Awareness Kit

**The River Basin**

- Introduction
- ▶ Geography
- ▶ Climate and Weather
- ▶ Hydrology
- ▶ Water Quality
- ▼ **Ecology and Biodiversity**
  - Ecology
  - Aquatic Ecology
    - Building Blocks
    - Aquatic Habitats
    - Life in Aquatic Ecosystems
      - Food Chains and Webs
      - Biomass and Production
    - Classification of Organisms
      - Microorganisms
      - Plants
      - Invertebrates
      - ▶ **Vertebrates**
      - Fish Species
    - Factors Affecting Ecosystems
  - Wetlands
  - Biodiversity
  - Millennium Ecosystem Assessment
  - References



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→ Ecology and Biodiversity: Classification of Organisms: **Vertebrates**

All animals that have a backbone are known as **vertebrates**, including fish, amphibians, reptiles, mammals, and birds.

**Fish**

Fish display every major **feeding type**:

- Herbivorous fish feed on periphyton or macrophytes, or may even filter phytoplankton from the water
- Carnivorous fish feed on molluscs, worms, insects, zooplankton, and other fish
- Omnivorous fish may feed on specific types of prey, or feed indiscriminately on nearly anything they can consume

Due to this diversity in modes of feeding, different fish can occupy very different places in a food web.

Similarly, some fish occupy very specific habitats while others can be found in a wide variety of rivers, lakes and reservoirs. The distribution depends on many factors, including oxygen concentration, temperature, the presence of macrophytes, the availability of suitable substrate for spawning, and current speed. Changes in a habitat (such as the reduction of flooding due to damming) can favour some types of fish, and disadvantage others.



**Orange River Mud Fish**  
Source: Inkwazi Fly Fishing 2009  
(click to enlarge)

**Amphibians**

Amphibians are cold-blooded vertebrates that generally live out their juvenile stages in aquatic environments and then move onto land as adults; however, some amphibians remain aquatic for their entire life. The most familiar amphibians are frogs and toads.

When amphibians transform from juvenile to adult, they often shift their diet. Tadpoles, for example, are usually herbivorous, consuming periphyton or macrophytes, but adult frogs are carnivorous, feeding on animals such as insects, worms, snails, or nearly any other animal they can swallow whole. Frog tadpoles are an important food source for some fish. In addition, aquatic birds and some reptiles (such as water snakes) prey upon the adults.

Because amphibians depend on water and warmer temperatures, they are most active in the summer and often hibernate on land in the winter.

**Reptiles**

Unlike amphibians, reptiles are largely terrestrial. In the Orange-Senqu River basin, they include turtles and snakes. As they are also cold-blooded, reptiles depend on environmental conditions to regulate their body temperature – they are more active in the summer and often hibernate during the winter. Reptiles lay eggs on land, and it must be warm enough for eggs to hatch and grow.

Reptiles have a thick skin that allows them to tolerate dry conditions, and hence are not as dependent on water as amphibians. However, some reptiles spend large amounts of time in water and feed there. Most reptiles, including those that feed in fresh water, are predatory and capture a variety of prey.



**Water Monitor Lizard.**  
Source: De Wet 2006  
(click to enlarge)



**Crocodile.**  
Source: Hatfield 2009  
(click to enlarge)

**Interactive**

**Basin Map**

Explore the sub-basins of the Orange-Senqu River

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**Video Tour**

Tour video scenes along the Orange-Senqu River related to the River Basin

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**Geography Maps**

Investigate land cover and terrestrial ecoregions in the basin

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**Water Cycle**

Examine how the hydrologic cycle moves water through and around the earth

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**Food Web**

Explore the interactions of living organisms in aquatic environments

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