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FOOD CHAIN & FOOD WEB

By

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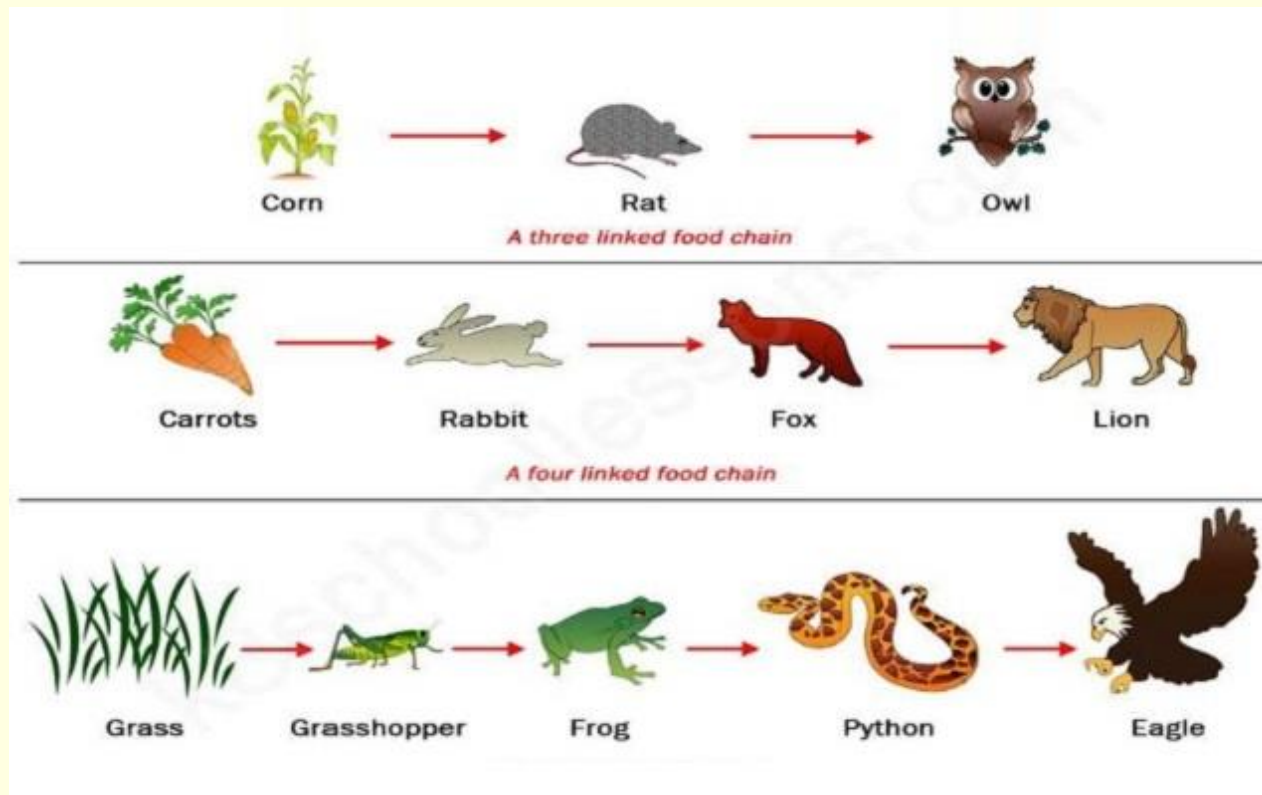
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FOOD CHAIN

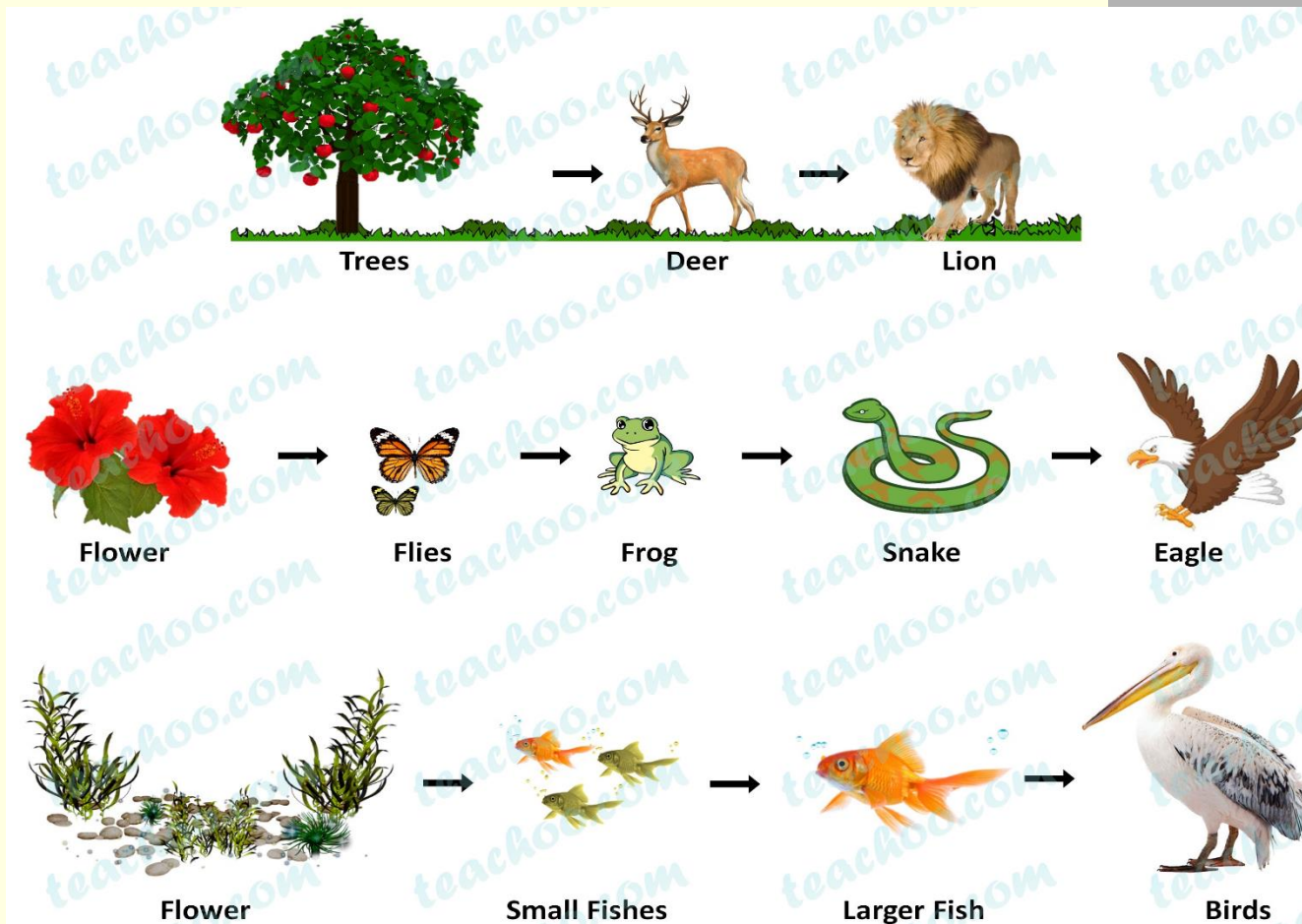
- The sequence of eating and being eaten in an ecosystem is known as **food chain**.



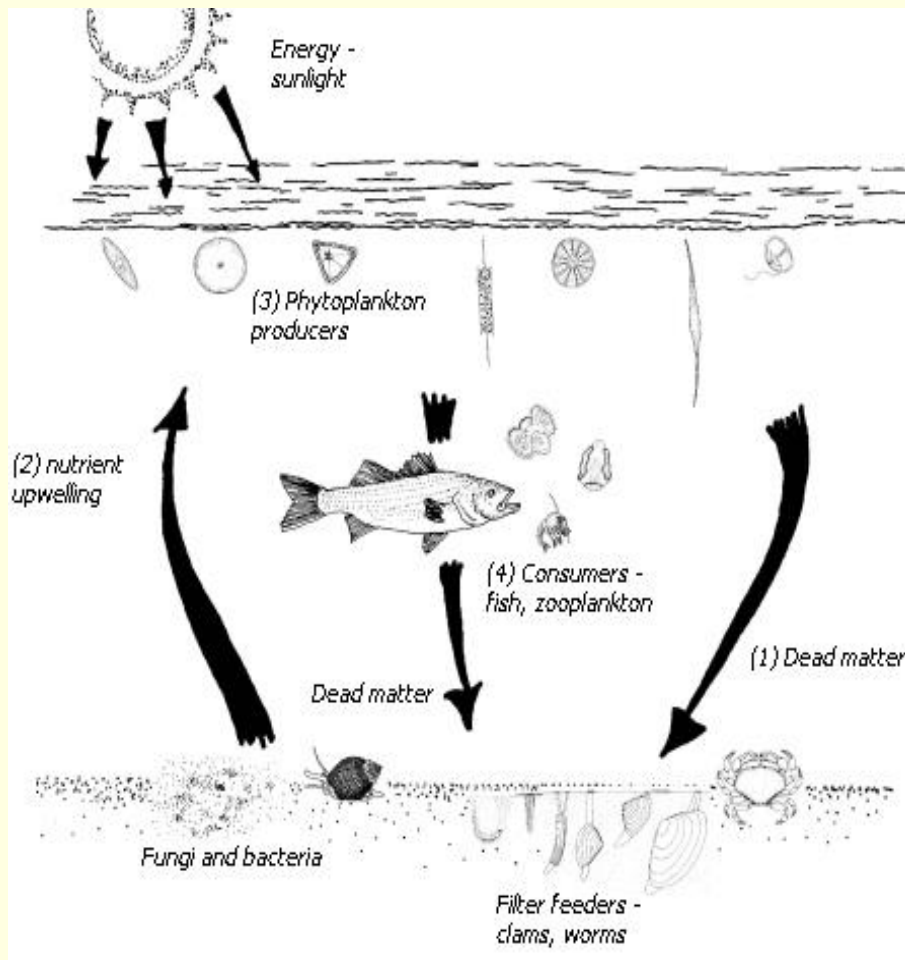
TYPES OF FOOD CHAIN

Grazing Food chain
Detritus Food Chain

Grazing Food Chain



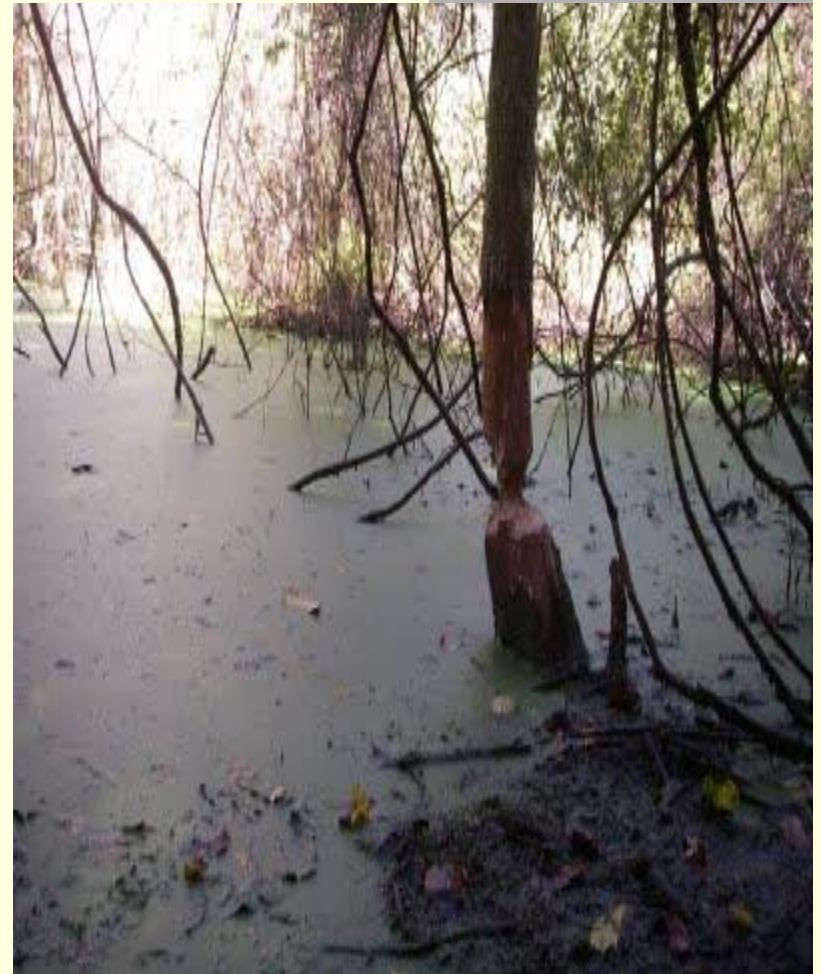
Detritus Food Chain



- It starts from dead organic matters.
- Even the decomposers consumed by detritivores and their predators.
- Eg. **Estuary**
- Grazing food chain derives energy from **plant**, while detritus gets from **plant biomass**

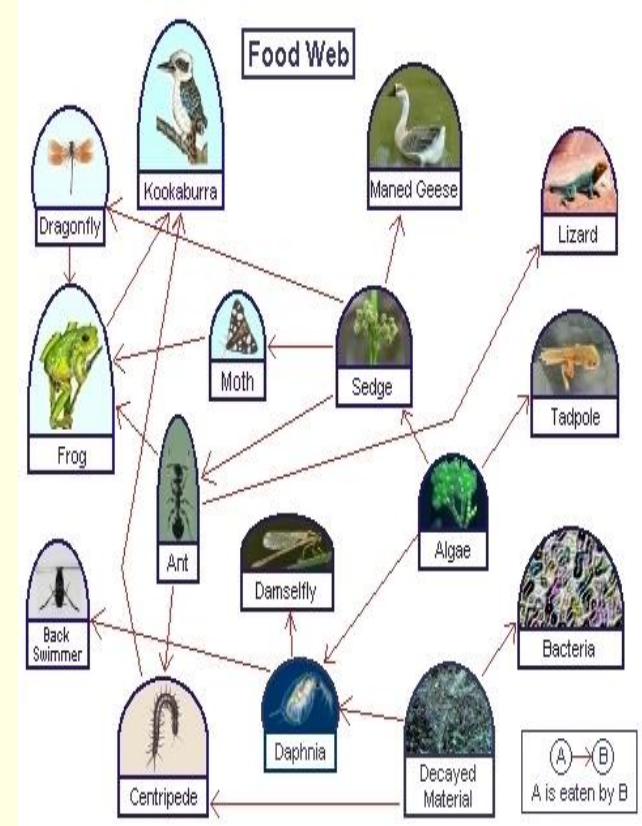
Saprotrophs: they feed on dead organic matter.

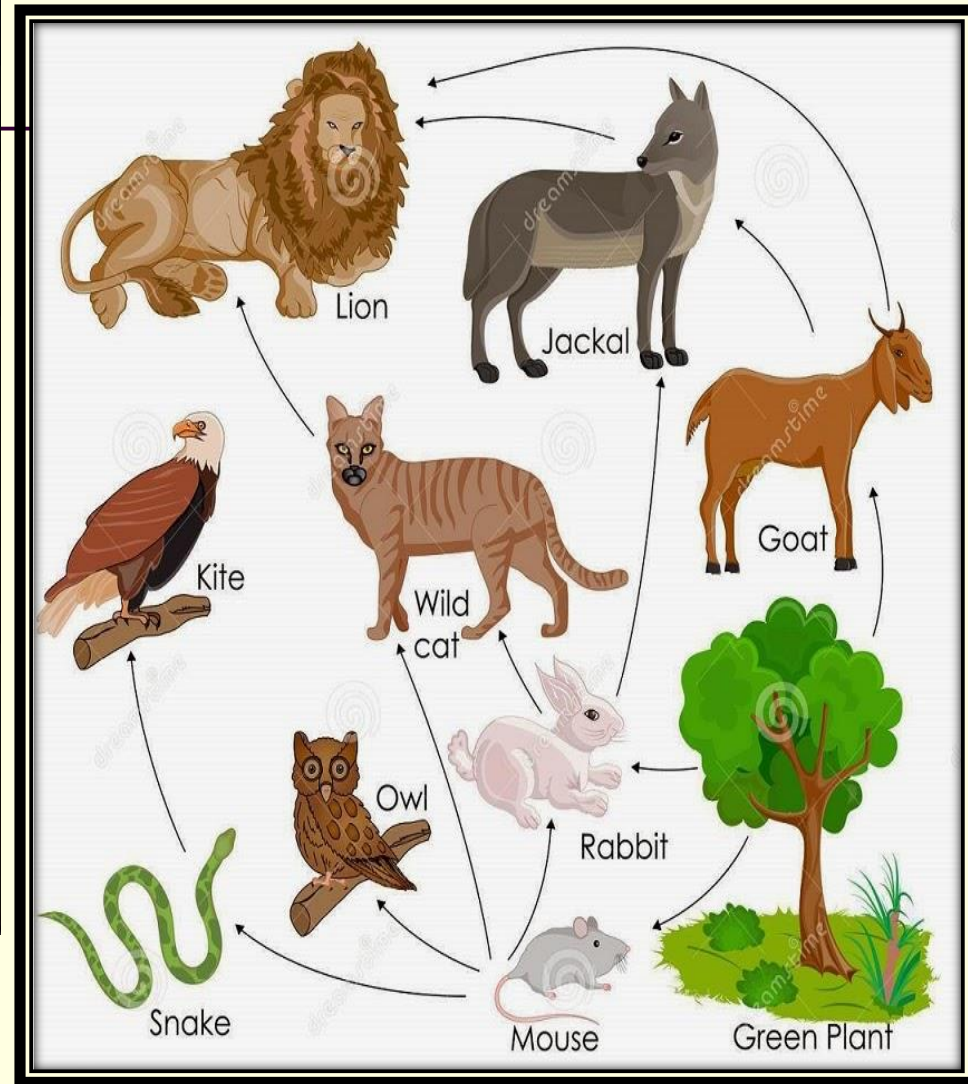
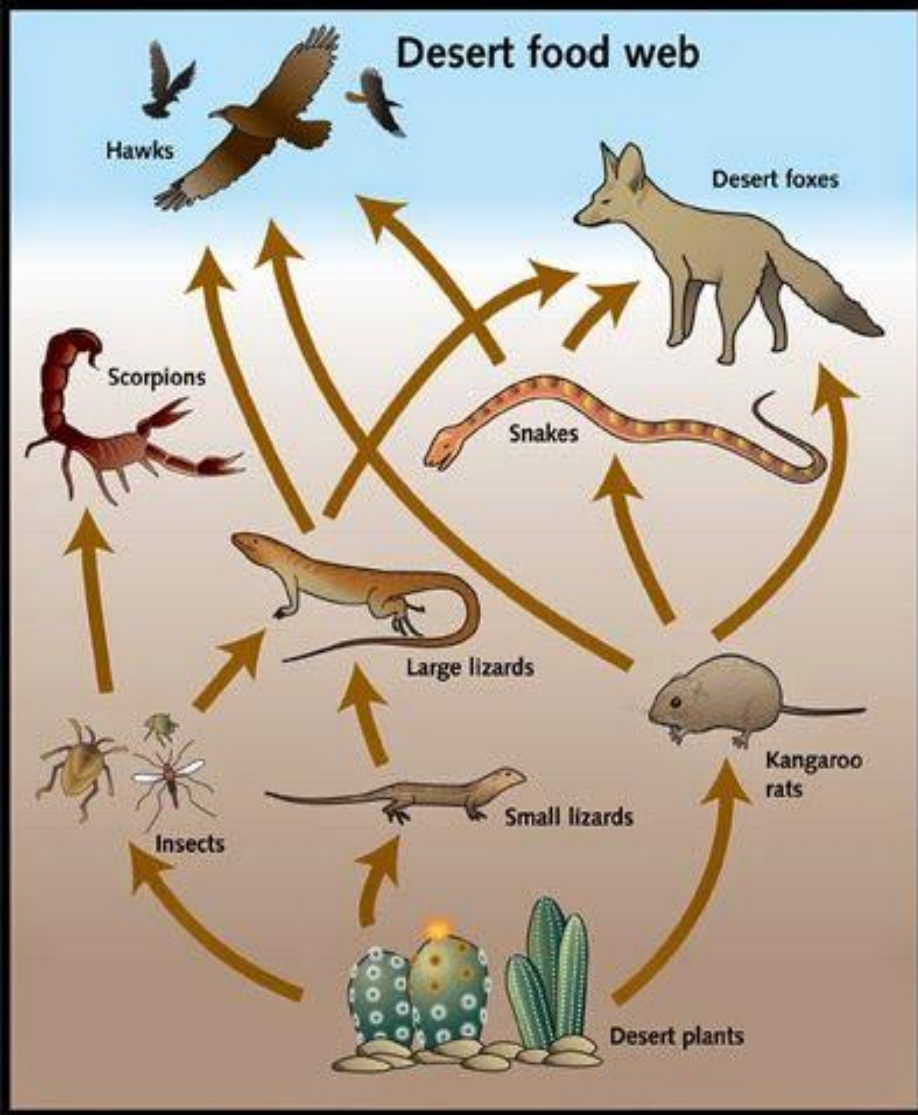
- Large quantity of leaf materials falls in the form of litter into the water.
- The leaf fragments are eaten by **saprotrophs**.
- Both the grazing and detritus food chain occur in natural ecosystem, but **grazing predominates**.



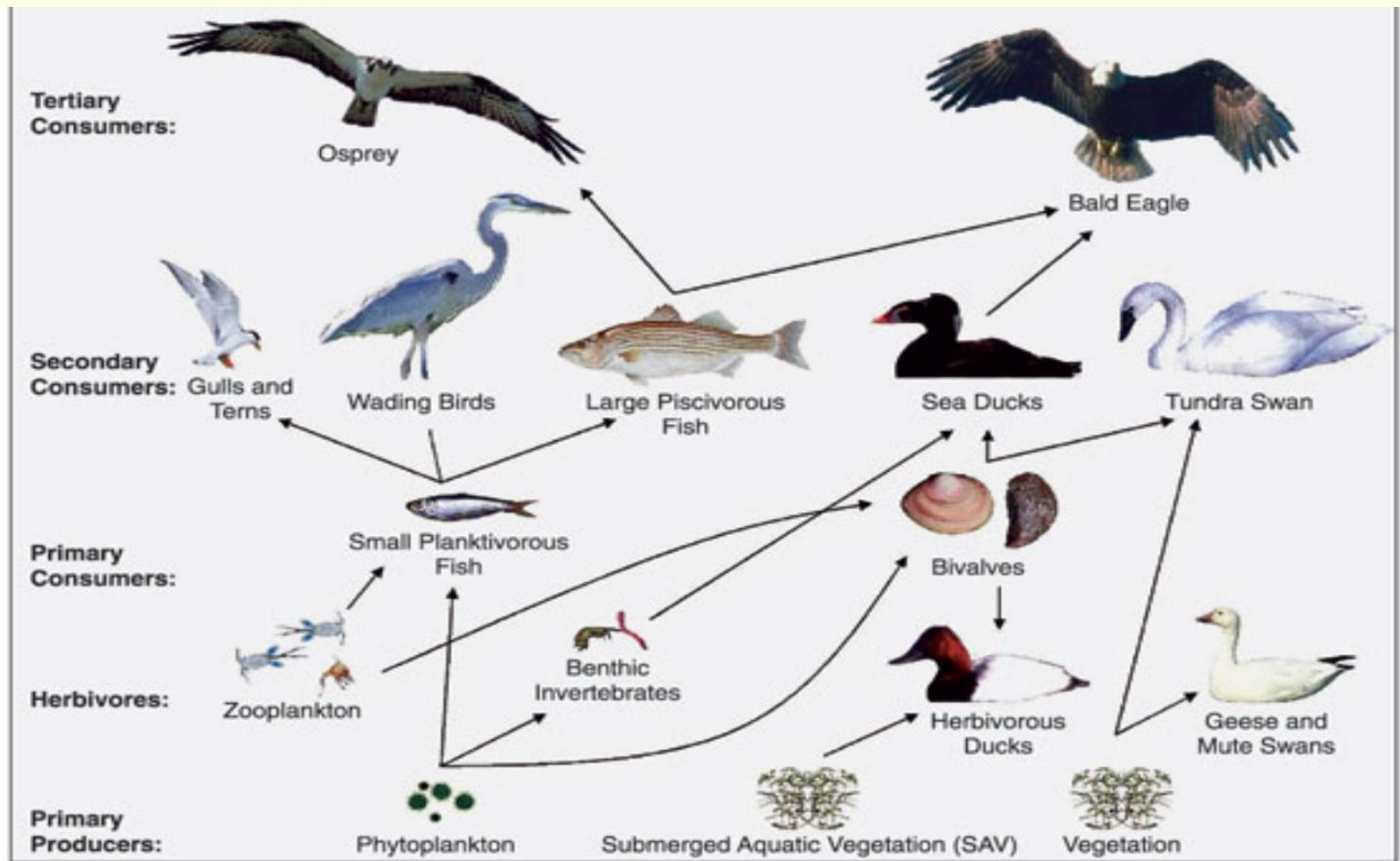
FOOD WEB

- It is the network of food chains where different types of organisms are connected at different trophic levels, so that the no. of options of eating and being eaten at each trophic level.





Water Bird Food Web



Significance of food chain and food webs

- Significant role in energy flow and nutrient cycle.
- Food chain are helping in maintaining and regulating the population size.: Ecological balance.
- Biological magnification:
- Eg. Pesticides transferred from one trophic level to the other.

Case study

- Biomagnification of DDT was observed in some birds like **Osprey- Sudden decline in population.**
- **The young ones were hatched out in premature condition leading to death.**
- **The reason is due to biomagnification of DDT.**
- **DDT used in low conc. – passed thro' phytoplanktons → Fish → Birds.**

Contd...

- The conc. of DDT was magnified several times in birds which caused the **thinning of shells in bird's eggs**- cause death to the young ones.
- The toxic chemicals are passed from one trophic level to the other.



■ Osprey Bird

Vulture Distribution in India

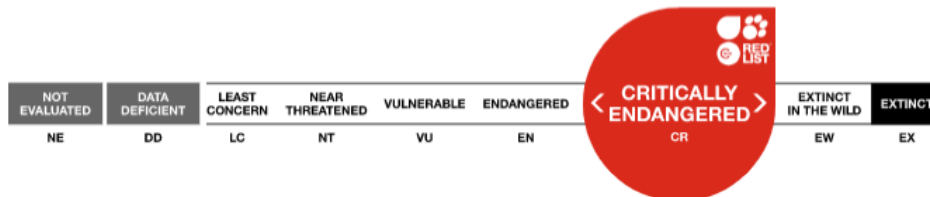
- ❖ White Rumped Vulture
- ❖ Indian Vulture
- ❖ Slender Billed Vulture
- ❖ Himalayan Griffon
- ❖ Eurasian Griffon
- ❖ Egyptian Vulture
- ❖ Red Headed Vulture
- ❖ Cinereous Vulture
- ❖ Bearded Vulture



Slender Billed Vulture






Eurasian Griffon




Vulture & Diclofenac Sodium

The Indian vulture (*Gyps indicus*) is an Old World vulture native to India, Pakistan and Nepal.

 NCBI Resources  How To 

 
US National Library of Medicine
National Institutes of Health

Advanced Journal list

 COVID-19 is an emerging, rapidly evolving situation.
Get the latest public health information from CDC: <https://www.coronavirus.gov>
Get the latest research from NIH: <https://www.nih.gov/coronavirus>
Find NCBI SARS-CoV-2 literature, sequence, and clinical content: <https://www.ncbi.nlm.nih.gov/sars-cov-2/>

Journal List > Biol Lett > v.2(2); 2006 Jun 22 > PMC1618889

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 Biol Lett. 2006 Jun 22; 2(2): 279–282.
Published online 2006 Jan 10. doi: [10.1098/rsbl.2005.0425](https://doi.org/10.1098/rsbl.2005.0425)

PMCID: PMC1618889
PMID: [17148382](https://pubmed.ncbi.nlm.nih.gov/17148382/)

Toxicity of diclofenac to *Gyps* vultures

[Gerry E Swan](#),¹ [Richard Cuthbert](#),² [Miguel Quevedo](#),³ [Rhys E Green](#),^{2,4} [Deborah J Pain](#),^{2,*} [Paul Bartels](#),⁵
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[Susanne Shultz](#),^{2,†} [Mark A Taggart](#),⁷ [Gerhard Verdoorn](#),¹⁰ and [Kerri Wolter](#)¹¹

Ban on diclofenac, a lifeline for vultures

TNN | Sep 2, 2015, 08:18 IST



A-

A+



KOZHIKODE: The Union government decision to ban multi-dose vials of painkiller drug diclofenac has sparked fresh hopes for the survival of three critically-endangered vulture species in the state, the combined population of which is currently below 50 inside the Wayanad Wildlife Sanctuary (WWS). Their breeding population at last

count was estimated at 35 Oriental white-rumped vultures, four Indian long-billed vultures and five red-headed vultures.

SSC- Vulture

SSC Groups


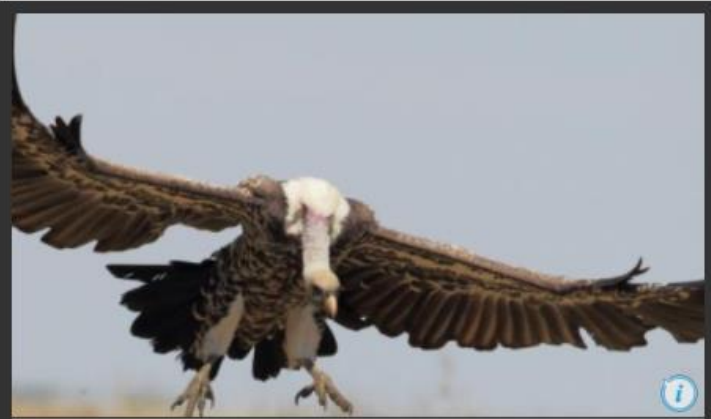
- Directory
- Amphibians & Reptiles
- Birds**
- Fishes
- Invertebrates
- Plants & Fungi
- Mammals
- Cross-cutting

Birds

- Asian Songbird Trade
- Bird
- Bustard
- Cormorant
- Crane
- Diver / Loon
- Duck
- Flamingo
- Galliforme
- Goose
- Heron
- Hornbill
- Pelican
- Penguin

Vulture

The IUCN SSC Vulture Specialist Group is dedicated to Accipitrid and Cathartid vulture conservation, research and education.



Links

- Website
- [2018 IUCN SSC Vulture SG report](#)
- [2016-2017 IUCN SSC Vulture SG report](#)



Thank You