

Module 14: "Color in Nature"

Lecture 38: "Color in- signalling"

The Lecture Contains:

- Signalling (Selection)
- Physical Protection
- Warning (Defensive Color)
- Color Pattern in Nature
- Color Advertising
- Color in Sexual Selection
- Color in Mimicry
- Dazzle Color
- Conclusion

◀ Previous Next ▶

Signalling (Selection)

In nature living beings have applied color for signalling to other species for their sexual selection



Peacock displays to a Peahen Evolution of red skin and hair through sexual selection Poison Frog's Selection
Plate 4 Color for Selection

The natural selection results from the struggle to survive, sexual selection emerges from the struggle to reproduce. The above examples (plate4) are displaying the colors that help the animals for their sexual selection within the species.

Physical Protection



Peacock displays to a Peahen Evolution of red skin and hair through sexual selection Poison Frog's Selection
Plate 5 Color for Selection

Dark colors confuse other predators and also protects from sun-burn. Man has cued the same for their protection. Zebra's bold color stripes (plate 5) help them to confuse lions in nature. Human beings have applied the same technique for their protection in war.

Warning (Defensive Color)



Coral Snake warns



Zebra Crossing

Plate 6 Warning against other predators

Warning coloration is usually bright and prominent. The bright prominent colors appear to warn the opponent. It is a defensive system to warn the predator not to attack. The color of Coral Snake (plate 6) seems to scare others by the dazzling color combination. Zebra crossing (plate 6) warns pedestrian before crossing the road.



Sand dune



Breaking waves



Spiral Shell

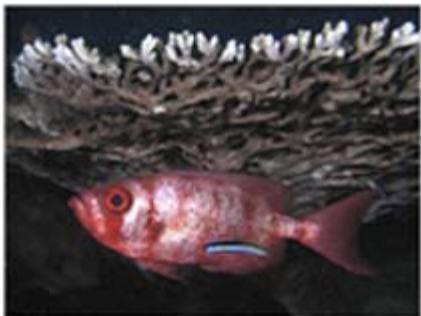
Plates 7 Nature's Pattern

Nature is rich with pattern (plates 7) that adorned the environment. Such patterns we discover all around us- tree-bark, stones, sand dunes, shells, river-flow, waves, etc. Each time the natural pattern exhibits its variations and possibility of further creation.

Color Advertising



Shrimp



Cleaning Service
Plate 8 Advertising by species



Bird of Paradise

Advertising (plate 8) coloration is the process of signalling. The signalling that would attract the other species or same species for their sexual selection.

Color in Sexual Selection



Peacock's Sexual Selection



Sea lions



Giraffe



Lizard

Plate 9 Sexual Selection/ Natural Selection

Sexual Selection or Natural Selection (plates 9) is not a accidental event. Living beings prepare themselves for the 'natural selections' with the help a process that includes color as one of the selection mechanism. It is the evolutionary process that has been going on for millions of years.

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Color in Mimicry



Moth



Lizard



Fighter Aircraft

Plate 10 Color Mimicry in Nature

(Source: http://www.google.co.in/search?hl=en&q=Camouflage+in+nature&bav=on.2.or.r_gc.r_pw.r_qf..cf.osb&biw=1314&bih=550&um=1&ie=UTF-8&tbn=isch&source=og&sa=N&tab=wi&ei=XqvYT9v7JcLjrAfgnojkBg ; June 13, 2012)

Color Mimicry (plate 8) is an interesting selection process in the living world. It happens when a group has similar characteristics and share common perceived similarity. By performing mimicking living being tries to take advantage to deceive the opponent. Because of a certain condition the technique of mimicking is adopted which helps to hide or take guard before the opponent discovers.



Chameleon Startles



Insect Startles



Startling Color

Plate 11 Creatures Startling

Color has multiple expression and non-verbal language. It goes through a complex process in expressing camouflage, startle predators, or mimic other things. All three creatures (plate 11) have startling colors to attract/ scare predator.

◀ Previous Next ▶