

# Learning Behavior Of Crocodiles (With Reference To Crocodiles Of Kotmi Sonar, Chhattisgarh)

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*Abstract: The present study shows classical conditioning in crocodiles based Pavlov theory. Area chosen is crocodile park, natural habitat of this creature in kotmi sonar in chhattisgarh.*

## I. INTRODUCTION

Crocodiles shared an ancient relation with India. They are depicted along with many Hindu God and Goddess in sculptures and planet. In pre historic periods only seven species known to be reside in India but now Mugger or marsh crocodile (*Crocodylus palustris* gharial and the estuarine (coast) crocodile (*C.poropus*). In India their habitat includes lakes and rivers, salt water crocodiles are found on the eastern coast of the country.



Figure 1

## II. FIELD OF STUDY

A large natural reservoirs has been turned into crocodile park near Campa village in Janjgir district. This step has been taken not only to save peoples residing near ponds which were habitat of crocodiles from being attacked by these creatures but also to protect this animal from being endanger species. It is home of near about 150 crocodiles picked up from various village ponds in the vicinity.

The park with steel fence was develop with 50 kilometer to stop the crocodile menace in the village. This reservoir has now become a novel crocodile park and tourist from all over country visit this place to watch the crocodiles. All activities done by them are natural.



Figure 2

## III. BEHAVIOR OF CROCODILE

In all vertebrates, behavioral state are controlled by common brainstem neuromodulatory circuits such as serotonergic system. They have a diverse set of sense organs which process incoming sensory inputs. They express a

number of complex behavior normally attributed to mammals. They learn to navigate mazes. Express social behaviors like nest building, parental care, construction of tunnels. website)

Crocodiles are also demonstrating classical conditioning like dog in Pavlov classical conditioning.

According to Pavlov there's a neutral stimulus (the bell), which by itself will not produce response, like salivation. There's also a non neutral or unconditioned stimulus (the food), which will produce an unconditioned response (salivation).

#### IV. EXPERIMENTAL OVERVIEW

- ✓ Monitoring the crocodiles during food given by the care taker.  
Animals were monitor in day from.10.00A.M to 12.00 noon. The care taker fed food and calls them in loud voice- Aaoo -Aaoo
- ✓ Counting the number of crocodiles from the fence which reach near bank on calling them while giving them food.
- ✓ Counting the number of crocodiles reached near the bank on calling them without giving food.
- ✓ Applying the classical conditioning theory of learning of Pavlov.



Figure 3

#### TABULATION

SNO	TIME— 10.00A.m- 1200 noon MONTH	No. OF CROCODILE REACH NEAR BANK ON FOOD GIVEN ON LOUD CALLING	No. OF CROCODILE REACH NEAR BANK ONFOOD GIVEN WITHOUT CALLING	PERCENTAGE OF CROCODILE REACHED NEAR BANK ON CALLING
1	Oct 2014	10	2	0.2
2	Nov 2014	12	5	0.42
3	DEC 2014	9	5	0.55
4	JAN 2014	10	6	0.6
5	FEB 2014	11	7	0.63

Table 1

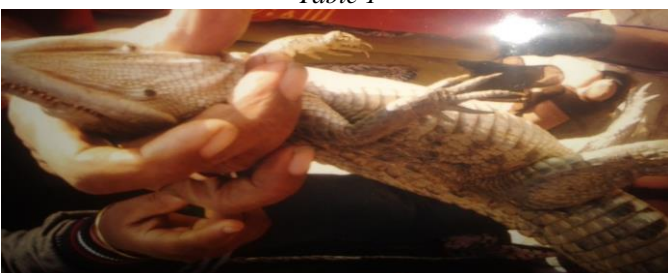


Figure 4

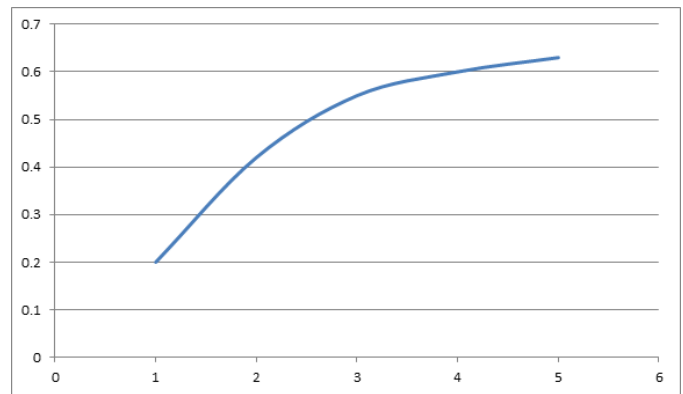


Figure 5

X value: months-1=oct,2=nov,3=dec,4=jan,5=feb  
Y value: percentage of crocodile reaches on bank on calling.

#### V. OBSERVATION

When the care taker gave food to this crocodile he also produce a loud call like 'AaooAaoo'. After a number of repeats of this procedure when he just only call them., on hearing his voice crocodiles started their movement toward the call(. Noted that—they only respond to voice of that particular care taker not to other people working there or visitors).They have learned an association between voice call and food this is just like condition response of Pavlov. The neutral stimulus has become a conditioned stimulus.

#### VI. DISCUSSION

According to Craik and Lockhart's Level of processing on deep memory suggest that the deep process (e.g. repeated rehearsal can lead to an increase like hood that it will enter a person long term memory and can be recalled any time .If the sound is made without reward of food numerous times the movement toward call also reduced as conditioning underwent experimental extinction a case of 'unlearning 'the association. Making sound after they fed may not lead to conditioned association being made between events. (ref- Pavlov theory of classical conditioning).

#### VII. RESULT

The present experiment shows classical conditioning in crocodiles. They have immense power of voice recognition. Pavlov theory of classical conditioning can applied .Learning power of vertebrates is due to advanced development of their brain.

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