

# Study on Declining Sparrow Population in Simhachalam and Yarada of Visakhapatnam

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**Abstract**—Sparrows are in critically endangered position today. Sparrows play a vital role in prevention of diseases and brings prosperity. They helps in maintenance of ecological balance, Pollination etc. In earlier days people used to give preference for sparrows but today due to many reasons like rapid urbanization, deforestation, loss of nesting sites, indiscriminate use of pesticides, use of chemically treated seeds, mushrooming growth of mobile phone towers and the signals the sparrow has population dropped down. In this paper I studied the population of house sparrows in the selected areas like Yarada, Simhachalam of Visakhapatnam. Data was collected on the population of sparrows. Questionnaire was conducted to the local people about the depletion of house sparrows, reasons of depletion and their contribution in the conservation

**Keywords:** Introduction of Sparrow, Statistics Threats to sparrow, Conservation.

## 1. INTRODUCTION

Sparrows are the small birds belong to the family Passeridae. Generally the house sparrows size 16cm long ranging from 14 to 18 cm (5.5 to 7.1 in). It is strongly associated with human habitations, and can live in urban or rural settings. It is not present in woodlands, grasslands deserts and eats seeds of grains, insects and weeds. Domestic cats, Hawks, Owls are generally enemies to it. The life span of house sparrow is only thirteen years old and forty percent of adult sparrows die every year. Now sparrows are critically endangered in position and placed in red data book. (<http://indianexpress.com/article/india/on-verge-of-extinction-house-sparrows-mostly-prefer-earthen-nests-research-4576875/>)

## 2. STATISTICS

Many sparrows were present in earlier days but now its population declined by 80 per cent in Andhra Pradesh due to Changing human lifestyles, climate change, microwave pollution, human induced changes in species' micro-habitat. According to conservationist Mohammed Dilawar said that the house sparrow that was declared the "State Bird of Delhi" in

2012 is edging towards extinction due to lack of emotional connect.66% of the sparrow population fall between 1966 and 2012 (source: State of the U.K.'s Birds 2012 report).50% of sparrow population declined in Hamburg and 60%in Prague in the last three decades. Eggs of sparrow were destroyed due to 900-1800 MHz frequency of electromagnetic waves from cell phone towers in Kerala. (<https://www.usatoday.com/story/news/world/2013/10/05/sparrowsdying/2923241/>).According to Indian Council of Agricultural research sparrow population was dropped by 80% and in other states of Kerala, Gujarat and Rajasthan it was dropped by 20%( Anjan Dandapat\*, Dipak Banerjee and Dibyendu Chakraborty)

## 3. METHODOLOGY

We collected information in both Yarada and Simhachalam areas of Visakhapatnam and Questionnaire was conducted for forty members to find out the sparrow number in their residence and contribution to preserve them.

### Study areas

#### Simhachalam and Yarada

The Simhachalam temple faces west and it is 14km away from Visakhapatnam. It is covered with more Cashew, Peepal, Banyan trees. The temple is situated among hills and shrubs, and mango groves. It takes 16 minutes from rail way station Visakhapatnam. Survey was conducted in Simhachlam hill area, Post office, Market, Main road and residential area.

The Yarada Beach is situated on the west coast of Bay of Bengal in Yarada, a village at a distance of 15 kilometres (9.3 mi) from Visakhapatnam. This Valley is surrounded by hills and survey was conducted in the areas like Yarada park, Beach road, housing colony, Market and Post office.

In Yarada, different tree species like Mango Mangifera indica) Guava(*Psidiumguajava*)Custardapple (*Annona reticulata*) Tamarind (*Tamarindus indica*), Babhul (*Acacia nilotica* ssp. *indica*), Neem (*Azadirachta indica*),

Peepal (*Ficus religiosa*), Banyan (*Ficus benghalensis*) etc where the communities of sparrows were noticed.

During survey answers from the local people regarding sparrow and their notification.

Answers from the local residents

- Seen in the morning 5.Am
- Sparrows in their house
- Don't know
- More sparrows in the earlier days
- Depleted due to cell towers
- Small bird
- What is the use of it?
- ??????

#### Simhachalam residential area

S NO	DATE	PLACE	NUMBER	AVERAGE
1	12-6-2013	Simhachalam residential area	56	
2	24-6-2013	Simhachalam residential area	52	
3	13-7-2013	Simhachalam residential area	70	
4	12-8-2013	Simhachalam residential area	72	
5	14-9-2013	Simhachalam residential area	65	315/5=63%

#### 4. Simhachalam Post Office Road

S NO	DATE	PLACE	NUMBER	AVERAGE
1	12-6-2013	Simhachalam post office road	60	
2	24-6-2013	Simhachalam post office road	40	
3	13-7-2013	Simhachalam post office road	42	
4	12-8-2013	Simhachalam post office road	45	
5	14-9-2013	Simhachalam post office road	30	217/5=43.4%

#### Simhachalam Hilly area

S NO	DATE	PLACE	NUMBER	AVERAGE
1	12-6-2013	Simhachalam hill area	62	

2	24-6-2013	Simhachalam hill area	65	
3	13-7-2013	Simhachalam hill area	70	
4	12-8-2013	Simhachalam hill area	55	
5	14-9-2013	Simhachalam hill area	65	317/5=63.4%

#### Simhachalam Main road

S NO	DATE	PLACE	NUMBER	AVERAGE
1	12-6-2013	Simhachalam Main road	25	
2	24-6-2013	Simhachalam Main road	30	
3	13-7-2013	Simhachalam Main road	35	
4	12-8-2013	Simhachalam Main road	40	
5	14-9-2013	Simhachalam Main road	45	175/5=35%

#### Simhachalam Market

S NO	DATE	PLACE	NUMBER	AVERAGE
1	12-6-2013	Simhachalam Market	20	
2	24-6-2013	Simhachalam Market	30	
3	13-7-2013	Simhachalam Market	25	
4	12-8-2013	Simhachalam Market	35	
5	14-9-2013	Simhachalam Market	38	148/5=29.6%

#### Yarada Park

S NO	DATE	PLACE	NUMBER	AVERAGE
1	10-6-2013	Yarada park	75	
2	24-7-2013	Yarada park	85	
3	30-8-2013	Yarada park	95	
4	12-9-2013	Yarada park	70	
5	14-10-2013	Yarada park	90	415/5=83%

#### Yarada Beach road

S NO	DATE	PLACE	NUMBER	AVERAGE
1	10-6-2013	Yarada beach road	15	

2	24- 7- 2013	Yarada beach road	9	
3	30- 8- 2013	Yarada beach road	7	
4	12- 9- 2013	Yarada beach road	10	
5	14-10- 2013	Yarada beach road	12	53/5=10.6 %

**Yarada Housing colony**

S NO	DATE	PLACE	NUMBER	AVERAGE
1	10-6-2013	Yarada housing colony	75	
2	24- 7- 2013	Yarada housing colony	95	
3	30- 8- 2013	Yarada housing colony	80	
4	12- 9- 2013	Yarada housing colony	90	
5	14- 10- 2013	Yarada housing colony	93	433/5=86.6%

**Yarada Market**

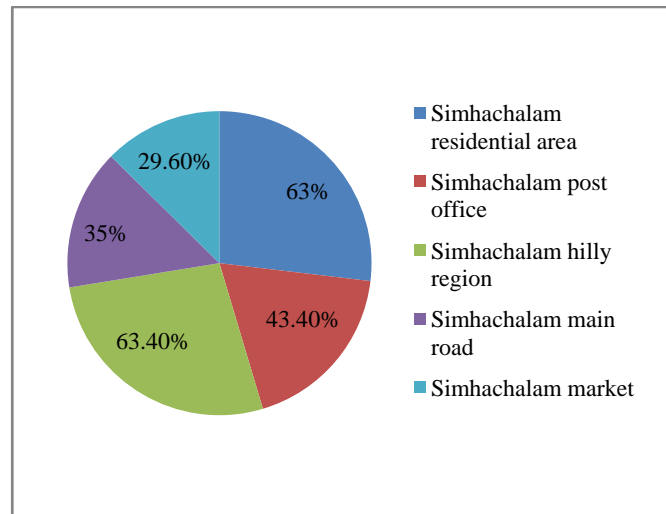
S NO	DATE	PLACE	NUMBER	AVERAGE
1	10-6-2013	YaradaMarket	15	
2	24- 7-2013	Yarada Market	25	
3	30- 8-2013	Yarada Market	30	
4	12- 9-2013	YaradaMarket	20	
5	14- 10- 2013	YaradaMarket	25	115/5=23 %

**Yarada Main road**

S NO	DATE	PLACE	NUMBER	AVERAGE
1	10-6-2013	Yarada Main road	15	
2	24- 7-2013	Yarada Main road	10	
3	30- 8-2013	Yarada Main road	10	
4	12- 9-2013	YaradaMain road	8	
5	14- 10-2013	YaradaMain road	10	53/5=10.6%

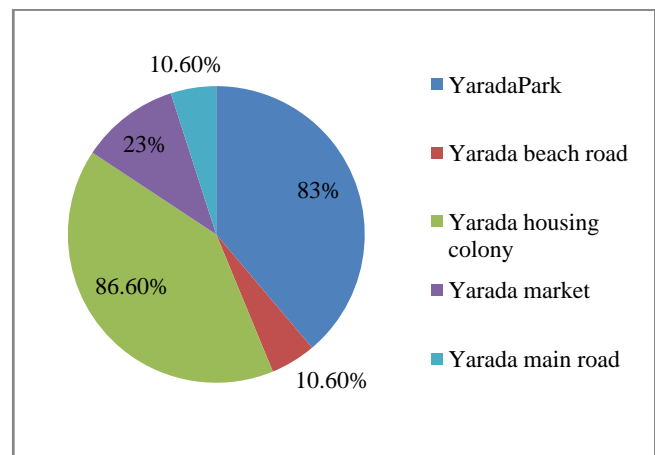
**Average of sparrows in Simhachalam**

**Percentage in Pie chart**



**Average of sparrows in Yarada**

**Percentage in Pie chart**



We reached there in the early morning 6.00Am and observed the sounds of sparrows. In Questionnaire many of the people answered that the sparrow is a small bird and there is no interest for them to contribute. There are many sparrows in the parks, residential areas Hilly regions and less population was noticed in main road, markets and beach roads. Reasons are heavy traffic and pollution, lack of houses etc. In Yarada park 83%, In Yarada housing colony 86.6%. In Yarada market 23%, Main road 10.6% and in Yarada beach road 10.6% of sparrows were present

In Simhachlam residential area 63% Post office 43.40%, In Hilly region 63.40%, In market 29.6% and Mainroad 35% of sparrows are present

**Sparrows in Yarada**



**Sparrows on wires**



**Greenery in Simhachalam**



**Greenery in Simhachalam**



**Simhachalam temple**



### 3 Threats

Major threats include lack of habitat for nesting, Negligence, Excess utilization of pesticides and fertilizers and lack of prey for sparrows. In addition to that Pollution, Constructional activities, deforestation, and Electromagnetic radiations put their population decline and listed in red data book. Radiations of the mobile towers can kill the sparrows by effecting its reproductive and nervous system. People provide food for sparrows in earlier days but the life styles were changed. People started neglecting these sparrows and there is no provision for them to stay or building nests.

### 4 Conservation

Due to huge depletion of sparrows they were listed in the red data book. So conservation of house sparrow is essential. However they are providing nest boxes to increase its population is not enough. Evaluate the effectiveness of nest boxes is important. Elder people should provide grains to them and attract to build the nests. Conducting awareness programmes all over the world like International, national conferences, Seminars, workshops etc help to adopt the technology or suggest measures and improve the sparrow population.

### 5. CONCLUSION

Lack of awareness, Urbanization, Usage of pesticides made sparrows depleted in almost all the areas. So as an environmentalist or citizen of India people should take responsibility to contribute or adopt measures to conserve the population by providing artificial nests, make holes .Provide place on the roofs .Food grains on the floor or open areas.

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