



GLIMPSES OF FLORA AND FAUNA OF  
**RAJ BHAVAN GOA**

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© Dr. Nitin Sawant

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Common Iora (*Aegithina tiphia*)



Raj Bhavan, Goa

Governor of Goa

## MESSAGE

Soon after my assumption of office as Governor of Goa, myself and my husband, Dr. Ram Kripal Sinha, former Union Minister, were happy to see the book – 'Glimpses of Flora and Fauna of Raj Bhavan Goa' compiled by the Department of Forests, Government of Goa, in co-ordination with the Goa State Biodiversity Board. This book, which basically contains photographs and brief mentions on the flora and fauna of the Raj Bhavan estate, is not only informative but also interesting for the readers. It was published during the tenure of Shri Bharat Vir Wanchoo, former Governor. I appreciate the efforts made by all those who were involved in this task.

Goa is endowed with great natural wealth, including a treasure of endemic plants and animals, forming part of the Sahyadris (Western Ghats), which, I am told, is one of the 34 biodiversity hot-spots of the world. The vast variety of flora and fauna can be said to have evolved after centuries of evolutionary process. The flora and fauna has a special significance to the State of Goa, being an attractive place for tourists. We need to realize their aesthetic and recreational values.

The Goa Raj Bhavan is unique, as it is the oldest Raj Bhavan in the country. The 86-acre Raj Bhavan estate overlooking the ever-flowing Mandovi river, on one side, and the vast Arabian sea, on the other side, predominantly consists of forests with varied species of flora and fauna. The mighty trees, the multi-sized plants and creepers, the colourful and attractive birds and butterflies and other different kinds of creatures found in the estate, have always fascinated me and also the visitors to this place. All these creations of God have a very important role in the preservation of ecological balance and maintenance of the harmony of nature. They impregnate lives with aesthetic beauty, grace and grandeur. One can imagine how lusterless, bleak and boring will be life in the absence of these precious gifts of nature. I think, a comprehensive survey and study on scientific lines will be useful to list out the actual and complete number of trees, plants, creepers, shrubs and the fauna found here, both endemic and seasonal, and their inherent value.

I am happy that, year after year, efforts are being made to further enrich the flora and fauna of this estate. I am told that it was during the tenure of the late Shri Kidar Nath Sahani, former Governor that an Aushadi Vatika was initiated and developed in the campus and it was visited by the late Dr. A.P.J. Abdul Kalam, former President of India, during his visit to Goa and the Raj Bhavan. I am happy that the Department of Forests has expanded the Aushadi Vatika, which, today, is an added source of attraction and appreciation for the visitors.

I hope that this book will be of immense interest to all those who go through it.

*Mridula Sinha*  
(Mridula Sinha)

19-9-2016



## Foreword

It is a matter of immense satisfaction and pride that Forest Department, Government of Goa in collaboration with Goa State Biodiversity Board has compiled and brought out for Raj Bhavan, Goa a small coffee table book on the flora and fauna of Raj Bhavan. I consider it a privilege to write the foreword of this most beautiful publication.

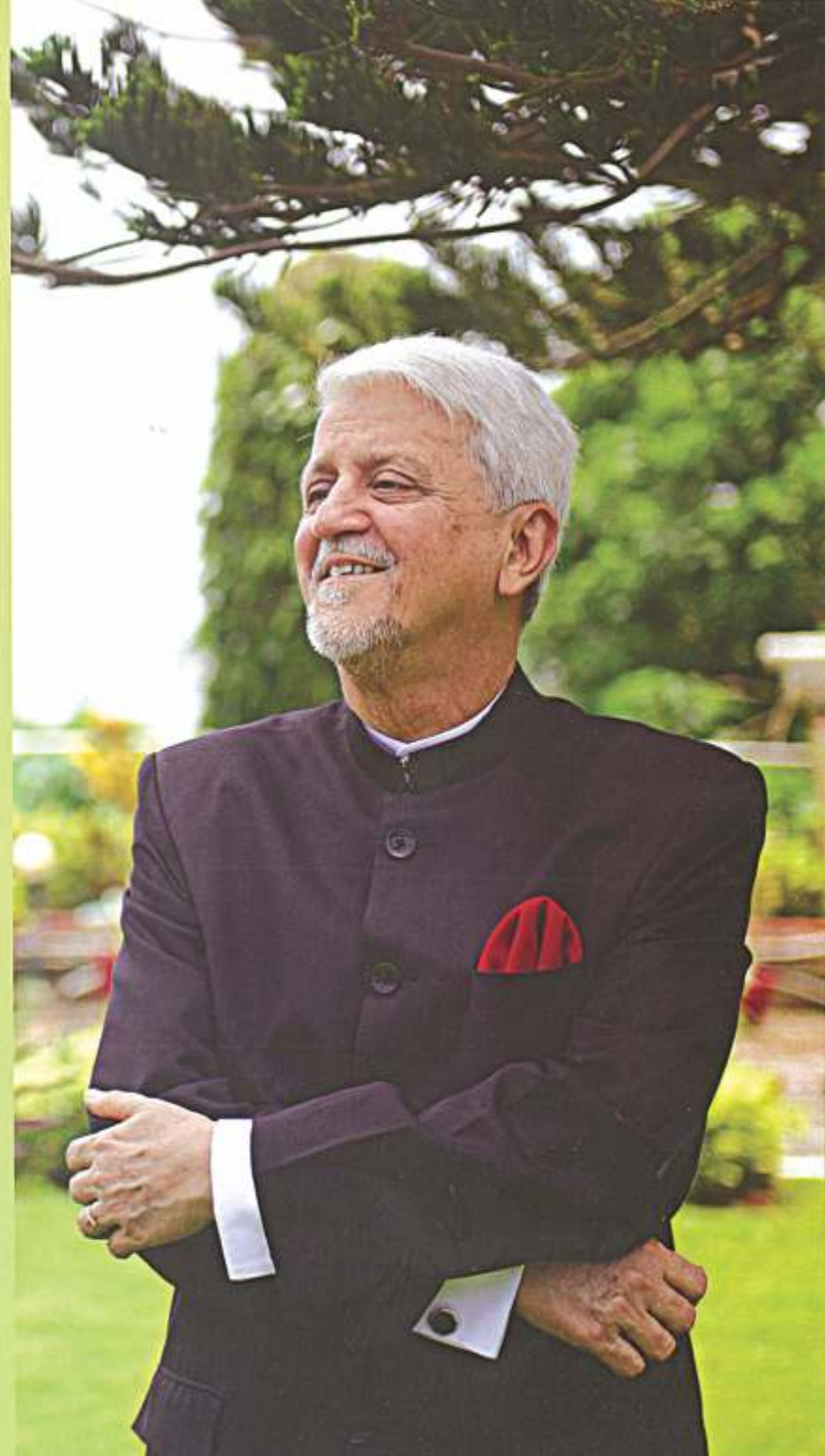
I must say this coffee table book has been conceived and published in a most professional manner, with the team having set very high bench marks for themselves. The quality of the photographs in particular are spectacular and of an extremely high order and clicked with great sensitivity, taste and finesse. All of them are stunning, breath-taking and eye-catching. The chapter on the butterflies is, indeed, most interesting and informative.

The quality of the paper used and the printing is of an exceptional order and the flow of the contents has been done in a very scientific yet elegant manner. By documenting the flora and fauna of Raj Bhavan, the team of Goa State Biodiversity Board and Forest Department has done a marvelous and splendid service for future readers, particularly those who would visit Raj Bhavan. This coffee table book has in many ways added to the radiance and glory of Raj Bhavan.

I would like to place on record my deep admiration for Mr. Richard D'Souza, Principal Chief Conservator of Forests under whose overall guidance, this most dazzling coffee table book has been published. He was, indeed, the prime mover of this project and his attention to detail is evident in the end product. I would like to, in particular, compliment Dr. Nitin S. Sawant (Member Secretary, Goa State Biodiversity Board) and Miss Trupti D. Jadhav (Research Scholar, Goa University) for their most outstanding and painstaking field work, photo documentation and listing and identification of the flora and fauna at Raj Bhavan. Mr. Raman Kulkarni has done a magnificent job in clicking the photographs and in the designing of this book. The team has amply exhibited their professionalism and deep sense of commitment in completing this project. I would also like to place on record my deep appreciation of the efforts of Lt. Cdr. Gaurav Sahai, my ADC for not only contributing some photographs, but also coordinating the whole exercise and assisting the above named officers during their field visits to the Raj Bhavan complex. He went well beyond his call of duty in his efforts to complete this classy project.

This coffee table book would be a treasure for Raj Bhavan and would add to its magnificent and sublime glory. The publication is a tribute to Raj Bhavan, the Forest Department, Government of Goa and Goa State Biodiversity Board.

**(H. E. Bharat Vir Wanchoo)**  
Governor of Goa





## Location

With several rivers and rivulets and their bays, alongwith capes projecting into the sea, Goa has many strategic points which provide dramatic and rare views of the surrounding waters and landscape. Among these capes, the one on which the present residence of the Head of State of Goa is located, and, one which is popularly termed as Raj Bhavan, earlier known as Cabo (the Portuguese word for cape) is the best known. It is at the confluence of the two main rivers of Goa: the Mandovi and the Zuari. There is no better panoramic view available in Goa than from this cape: the Arabian Sea towards the west, the bay of the river Mandovi and Fort Aguada on the north, and, on the south, the bay of the river Zuari and the busy port of Mormugao.





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## Ancient History

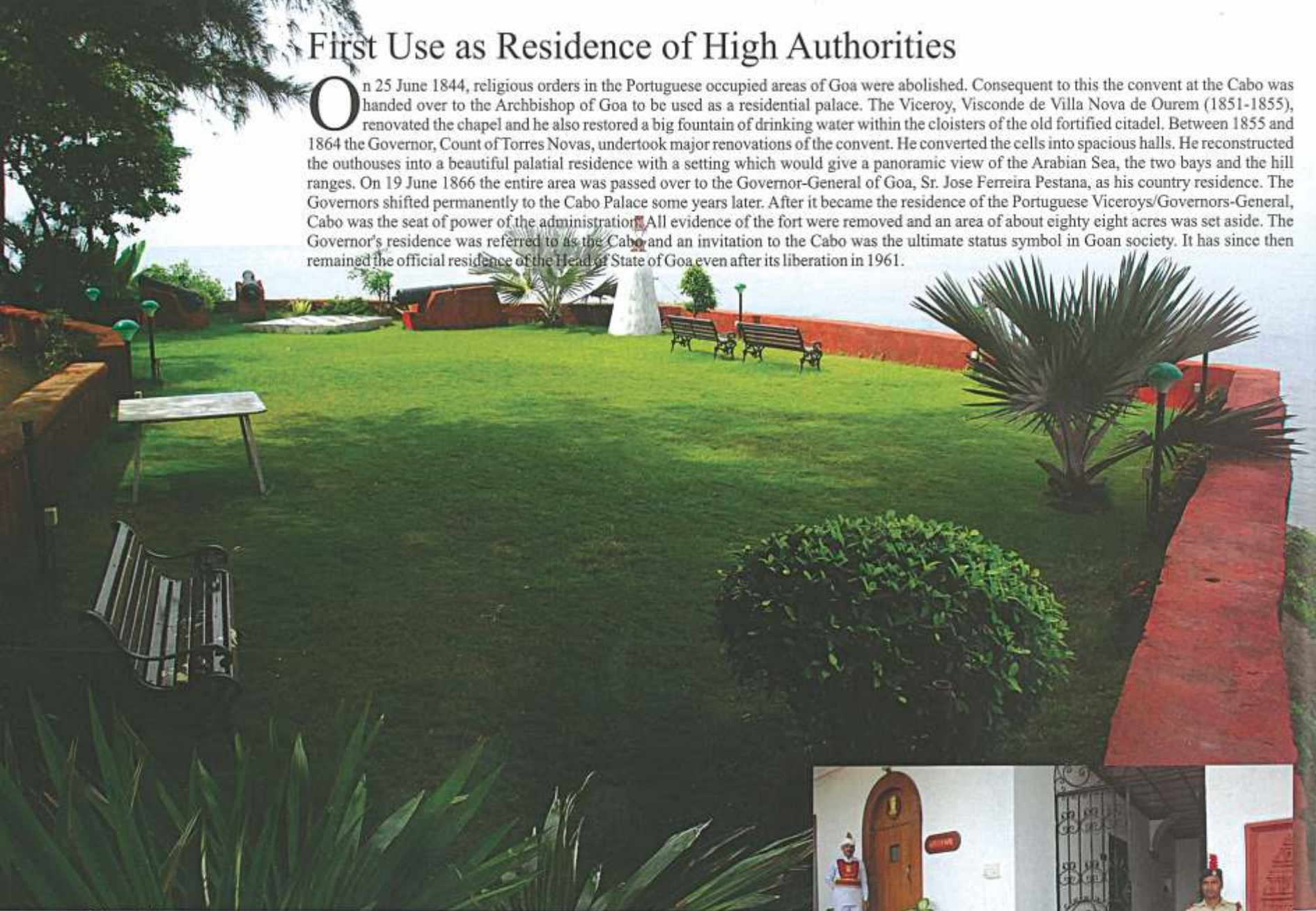
**T**his particular cape had remained unhabitated and isolated over the centuries. It is possible that there may have been some human habitation in the earlier centuries, but, as it is a densely forested area, there are no signs of earlier settlers. The beauty, solitude, uniqueness and strategic features of the Cabo, now Raj Bhavan were not lost on the Portuguese. A small chapel was constructed at the very end of the cape dedicated to Our Lady of the Cape (Nossa Senhora do Cabo). It has been used as landmark by the seafarers, for centuries. It still exists as a landmark for the seafarers.



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## First Use as Residence of High Authorities

On 25 June 1844, religious orders in the Portuguese occupied areas of Goa were abolished. Consequent to this the convent at the Cabo was handed over to the Archbishop of Goa to be used as a residential palace. The Viceroy, Visconde de Villa Nova de Ourem (1851-1855), renovated the chapel and he also restored a big fountain of drinking water within the cloisters of the old fortified citadel. Between 1855 and 1864 the Governor, Count of Torres Novas, undertook major renovations of the convent. He converted the cells into spacious halls. He reconstructed the outhouses into a beautiful palatial residence with a setting which would give a panoramic view of the Arabian Sea, the two bays and the hill ranges. On 19 June 1866 the entire area was passed over to the Governor-General of Goa, Sr. Jose Ferreira Pestana, as his country residence. The Governors shifted permanently to the Cabo Palace some years later. After it became the residence of the Portuguese Viceroys/Governors-General, Cabo was the seat of power of the administration. All evidence of the fort were removed and an area of about eighty eight acres was set aside. The Governor's residence was referred to as the Cabo and an invitation to the Cabo was the ultimate status symbol in Goan society. It has since then remained the official residence of the Head of State of Goa even after its liberation in 1961.



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## Present Raj Bhavan

Much of the old structure has been retained with several additions. There is a private helipad, a private beach, a private jetty and a strategic place called Cannon point, where the old cannons are still to be seen. The building itself is at a height of a hundred and fifty four meters above sea level. The oldest portion which has, by and large, remained unaltered is the chapel.



Photo : Gaurav Sahai



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## Flora of Raj Bhavan

The vegetation at Raj Bhavan is moist-deciduous type and the floral diversity consists of heterogeneous species. Besides the natural forest cover the Raj Bhavan has a medicinal arboretum which is maintained by Forest Department, Government of Goa. A list of some of the common plants at Raj Bhavan is provided at the last page of this book.



**Terminalia elliptica**  
*Terminalia tomentosa*

Large deciduous trees. Leaves alternate or sub opposite, coriaceous, elliptic, apex acute, acuminate or rounded, base rounded or cordate, margins sometimes crenulate, glabrous or tomentose, to 18 x 8 cm. Flowers in axillary spikes and terminal panicles; pale yellow. Sepals broadly ovate, acute. Petals absent. Drupes with 5 broad, glabrous, coriaceous, reddish wings.

**Flowering & Fruiting :** March-November.

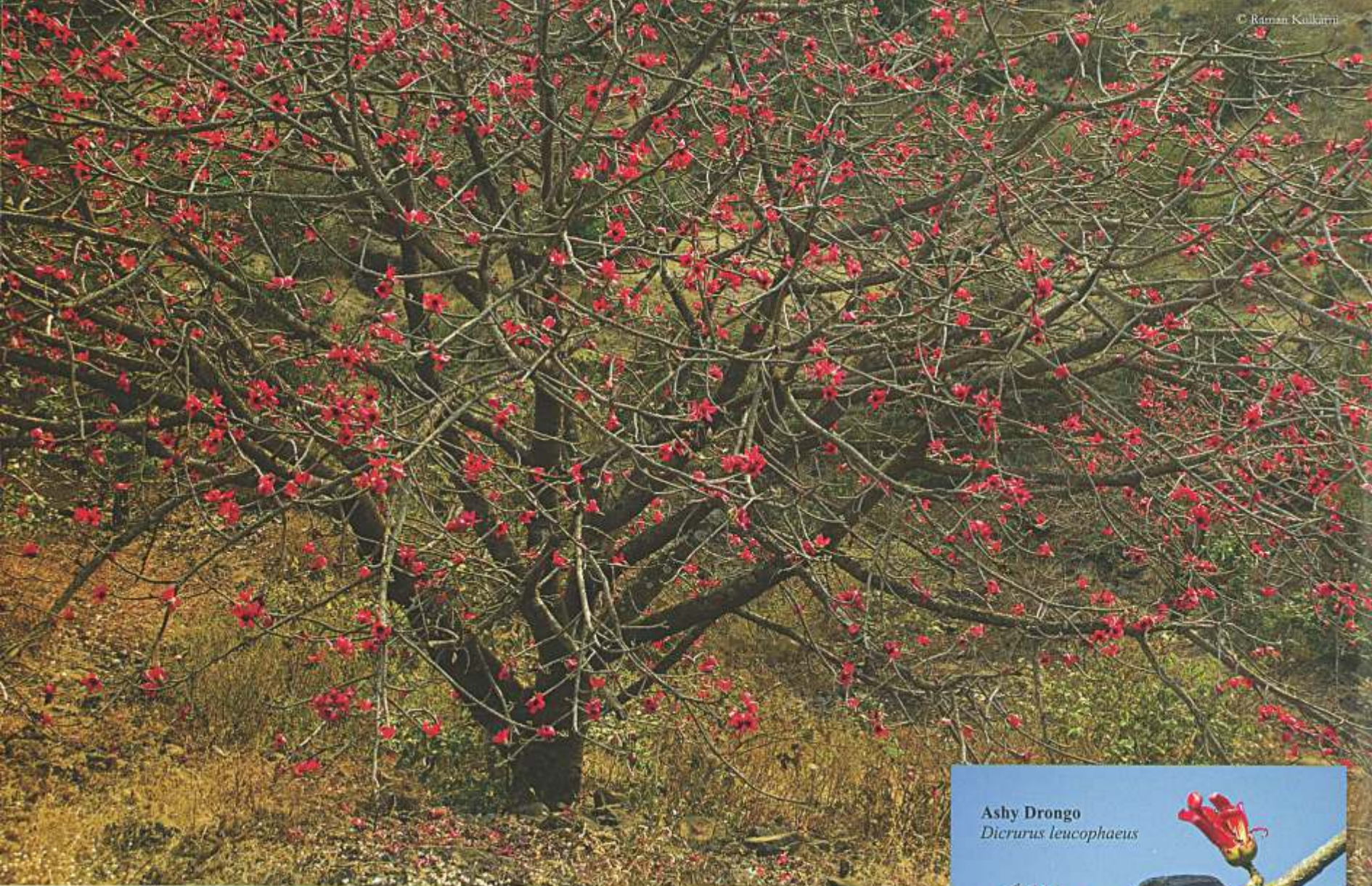
**Note :** Very common in dry and moist deciduous forests. Bark thick, black, deeply fissured. Insect galls mostly infect young leaves, the entire infected leaf closely resembles to the terminal spike and hence confused with fruits of the species. Leaves with stalked glands on the midrib beneath.

**Local Name :** Matti



© Dr. M. M. Sardesai

*State Tree of Goa*



**Bombax ceiba L.**  
*Bombax malabaricum* DC.

Large, deciduous prickly trees; prickles conical, black. Leaves crowded at the ends of branches, digitate, leaflets 5-7, ovate, lanceolate or elliptic-lanceolate, acuminate, entire, to 20 x 8 cm, glabrous. Flowers sessile, crowded at the ends of branches, red. Calyx cupuliform, glabrous outside, densely silky within.

**Flowering & Fruiting :** February- June.

**Local Name :** Kate Savar, Saur



**Ashy Drongo**  
*Dicrurus leucophaeus*

Many birds visit trees in search of nectar when in flower.



© Ramjan Kulkarni

***Smilax zeylanica* L.**

**Local Name :** Chopchini, Ghotwel

Scandent or twining. Leaves alternate, rounded or truncate at base, elliptic-ovate or suborbicular, glabrous, strongly nerved, petiole up to 1.5 cm long. Flowers numerous in umbels on slender branches. Perianth lobes 6 in 2 whorls. Stamens 6, adnate to perianth. Berries 0.5-0.8 cm in diam, globose, reddish at maturity.

**Flowering & Fruiting :** June-February



© Raman Kulkarni

***Gloriosa superba* L.**

Perennial herbaceous climbers. Rootstock fleshy, white, arched; roots fibrous. Stems and branches terete. Leaves ca 12 x 3 cm, alternate, opposite or in whorls of 3, ovate-lanceolate, acuminate and often coiled at apex, rounded or cordate at base, entire. Flowers large, axillary, solitary or in subcorymbose cymes; pedicels ca 10 cm long, the tip deflexed. Perianth segments distinct, ca 5 x 1 cm, linear-lanceolate, green, turning yellowish-green below middle and red above at maturity, with crispy wavy margins. Stamens 6; filaments exserted, ca 4 cm long, dark purple; anthers linear, dorsifixed, versatile. Style long, trifid. Capsules ellipsoid, ca 3 x 1.5 cm, dark green. Seeds many, subglobose, angular, black.

**Flowering & Fruiting :** July-November

**Local Name :** Bachnaj, Kal-lawi



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*Barleria terminalis*



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*Tricholepis amplexicaulis*



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*Anacardium occidentale*



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*Ixora coccinea*



*Capparis zeylanica*





Raman Kulkarni

*Terminalia paniculata*

© Raman Kulkarni



*Urena lobata*

© Raman Kulkarni



*Careya arboea*

© Dr. M. M. Santestani



*Aristolochia indica*



© Raman Kulkarni

*Cassia fistula*



© Dr. S. R. Yadav

*Terminalia bellirica*



© Dr. M. M. Sardesai

*Mimosa pudica*



© Dr. M. M. Sardesai

*Tridax procumbens*



© Dr. M. M. Sardesai

*Zanthoxylum rhetsa*

## Birds of Raj Bhavan



Common Kingfisher (*Alcedo atthis*)



© Raman Kulkarni

White-throated Kingfisher (*Halcyon smyrnensis*)

**T**hirty (30) species of birds were observed during the field visit to Raj Bhavan. The Raj Bhavan premises harbours various species of forest and wetland birds which also includes raptors and owlets. It's a nesting ground for birds such as Brahminy Kite, Drongo, Bulbuls and Sunbirds. Birds such as Paradise Flycatcher, Rufous Woodpecker adds to the beauty of this place.

© Raman Kulkarni

White-bellied Sea Eagle (*Haliaeetus leucogaster*)





Coppersmith Barbet  
(*Megalaima haemacephala*)

© Ramani Kulkarni



Crimson-backed Sunbird (*Nectarinia minima*)

© Ramani Kulkarni



Orange-headed Thrush (*Zosterops citrina*)

© Ramani Kulkarni



Red-vented Bulbul (*Pycnonotus cafer*)

© Raman Kulkarni



Black-rumped Flameback (*Dinopium benghalense*)





© Ramani Kulkarni

Asian Koel (*Eudynamis scolopacea*)



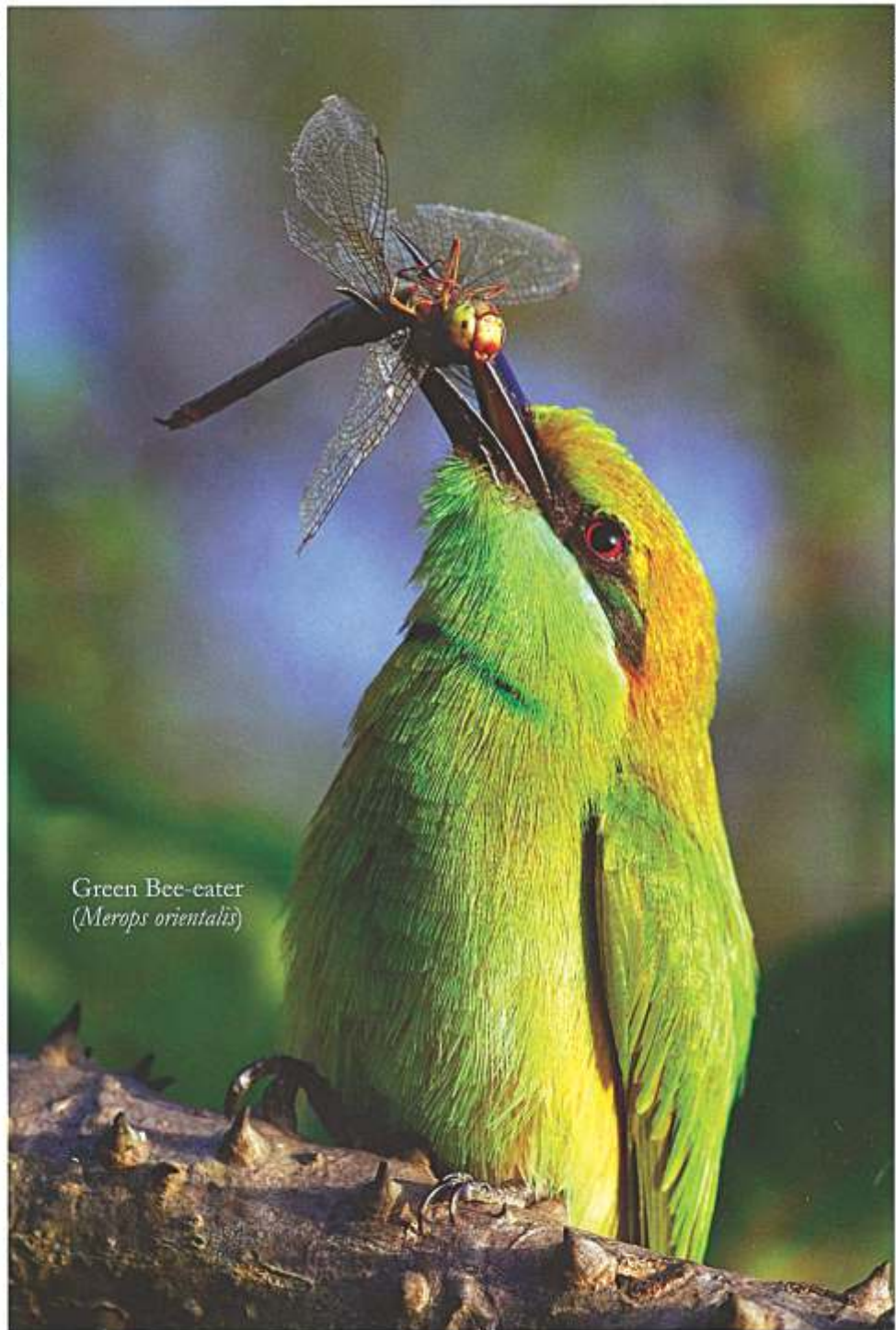
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Jungle Babbler (*Turdoides striatus*)



© Ramani Kulkarni

White-checked Barbet (*Megalaima viridis*)



© Ramani Kulkarni

Green Bee-eater  
(*Merops orientalis*)

**Forest Wagtail** (*Dendronanthus indicus*)

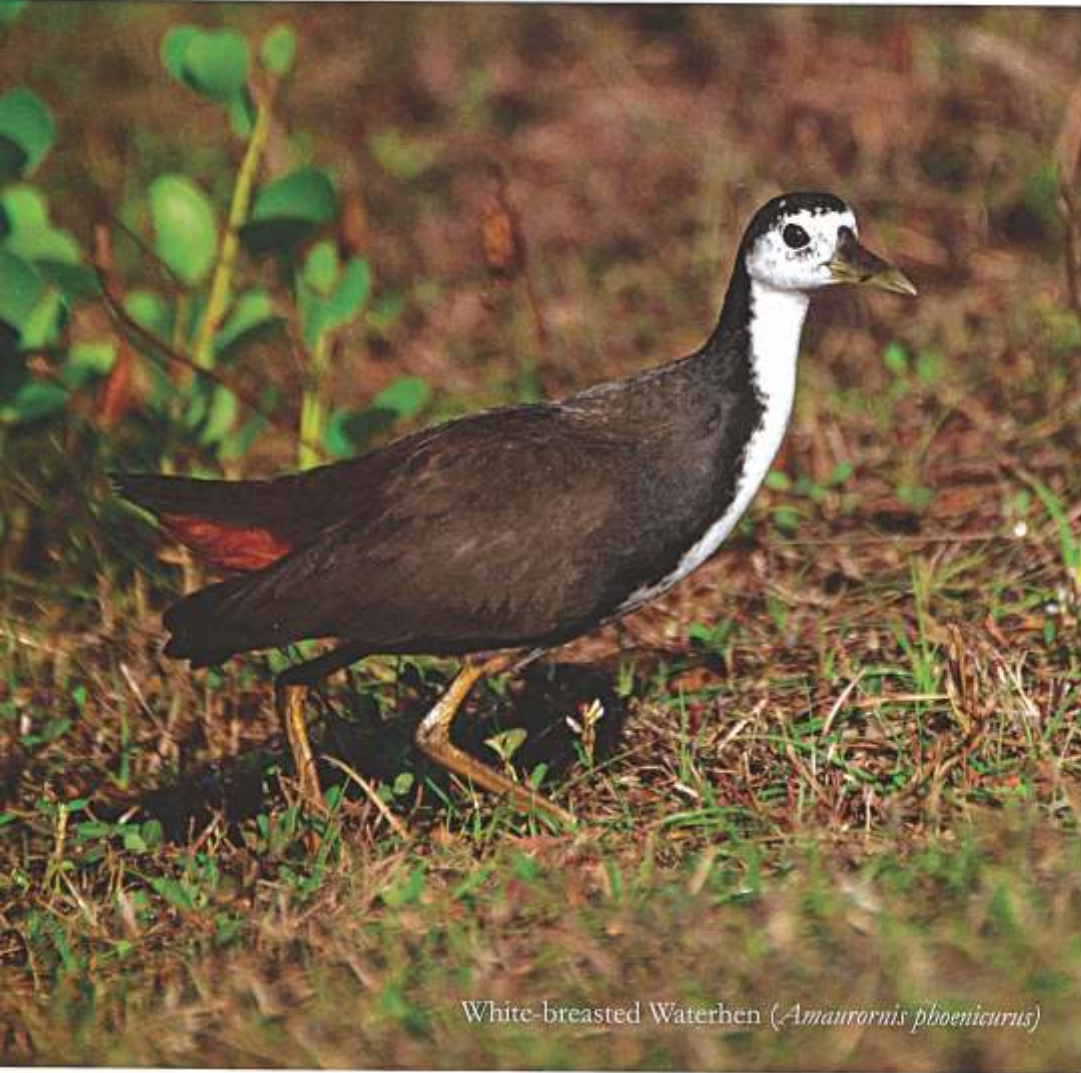


© Dr. Nitin Sawan

Indian Magpie Robin (*Copsychus saularis*)



© Dr. Nitin Sawant





Rufous Woodpecker (*Celeus brachyurus*)



Tamil Lacewing (*Cetbosia nietneri*)  
50-95 mm

## Butterflies of Raj Bhavan

**T**he Rajbhavan primise supports a variety of insect fauna. Nests of cremastogaster ants were seen. The area is rich in butterflies, 34 species of butterflies belonging to 5 families were recorded.



1



2



3



4

1 Chocolate Pansy (*Junonia iphita*) 55-80 mm  
 2 Lemon Pansy (*Junonia lemonias*) 40-60 mm  
 3 Tawny Coster (*Acraea violae*) 50-65 mm  
 4 Common Bushbrown (*Mycalesis perseus*) 38-55 mm

Peacock Pansy (*Junonia almana*)  
60-65 mm



© Raman Kulkarni



Common Emigrant (*Catopsilia pomona*)  
55-80 mm



© Raman Kulkarni



140-190mm  
Southern Birdwing  
*Troides minos*



14-22mm  
Grass Jewel  
*Freyeria trochylus*



4



© Raman Kulkarni

5



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6



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- 1 Tailed Jay (*Graphium agamemnon*) 85-100 mm
- 2 Common Leopard (*Phalanta phalantha*) 50-60 mm
- 3 Grey Count (*Tanaecia lepidea*) 65-80 mm
- 4 One Spot Grass Yellow (*Eurema andersoni*) 38-45 mm
- 5 Psyche (*Leptosia nina*) 35-50 mm
- 6 Red Helen (*Papilio helenus*) 110-130 mm



© Raman Kulkarni



- 1 Common Crow (*Euploea core*) 85-95 mm
- 2 Slate Flash (*Rapala manea*) 30-33 mm
- 3 Common Mormon (*Papilio polytes*) 90-100 mm
- 4 Common Sailer (*Neptis hylas*) 50-60 mm

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Lime Butterfly (*Papilio demoleus*)  
80-100 mm



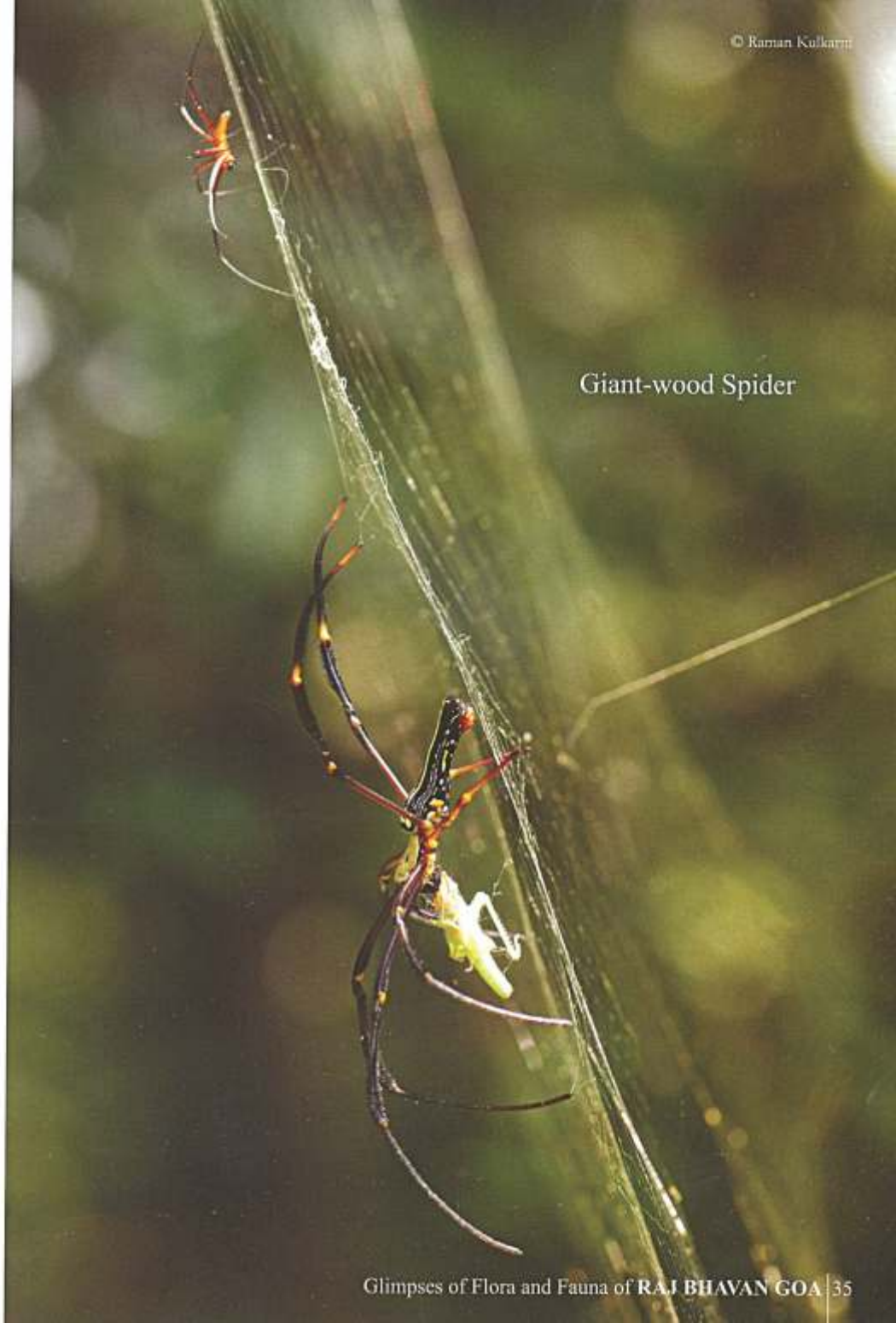
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Tunnel Spider



Giant-wood Spider





Common Garden Lizard  
(*Calotes versicolor*)



Forest Calotes  
(*Calotes rouxi*)





Forest Calotes  
(*Calotes rouxi*)

Common Indian Monitor Lizard (*Varanus bengalensis*)



© Raman Kulkarni

Semi-venomous Snake

Common Vine Snake (*Ahaetulla nasuta*)



© Dr. Nitin Sawant



1



2

© Dr. Nitin Sawant



3

© Raman Kulkarni

### Venomous Snakes

- 1 Spectacled Cobra (*Naja naja*)
- 2 Russell's Viper (*Daboia russelii*)
- 3 Saw-scaled Viper (*Echis carinatus*)



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4



5

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6

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#### Non-venomous Snakes

4 Indian Rock Python (*Python molurus molurus*)

5 Banded Kukri Snake (*Oligodon arnensis*)

6 Common Bronzeback Tree Snake (*Dendrelaphis tristis*)



Three-striped Palm Squirrel  
(*Funambulus palmarum*)

Hanuman Langur  
(*Semnopithecus entellus*)



# Checklist of Flora and Fauna of RAJ BHAVAN - GOA

## Flora of Raj Bhavan

1. Acacia
2. Air Potato
3. Amaltas/ Golden shower tree/Indian Laburnum
4. Angled Sida
5. Bamboo
6. Beef Wood Tree
7. Belliric Myrobalan/Beach Almond
8. Blue Barleria
9. Cashew Tree
10. Chandada
11. Cluster Fig Tree
12. Coat Button
13. Coconut Tree
14. Common Foxtail Orchid
15. Common Lantana
16. Common Purple Mallow
17. Common Sida
18. Common Suprge
19. Common Swordbean
20. Cuthch Tre/Black Catechu
21. Devil Weed
22. Dhaman
23. Fish Tailed Palm
24. Giant Milkweed
25. Glory Lily
26. Indian Ash Tree
27. Indian Birthwort
28. Indian Prickly Ash
29. Indian Sorrel
30. Indian Tulip Tree
31. Jungle Flame
32. Karanda
33. Kindal Tree
34. Kumbo
35. Mango Tree
36. Matti/Crocodile Bark Tree
37. Nandi Tree
38. Nux Vomica/ Poison Nut
39. Pandanus/Common Screw Pine
40. Paper Flower Climber
41. Pot Cassia
42. Purple Bauhinia
43. Railway Glory
44. Sacred Fig
45. Screw Fruit Bush
46. Serpent Root
47. Silk Cotton Tree
48. Smilax
49. Spanish Cherry
50. Tamarind Tree
51. Tangled Mat
52. Touch Me Not
53. Yellow Flame Tree

## Butterflies of Raj Bhavan

1. Angled Castor
2. Chocolate Pansy
3. Common Bluebottle
4. Common Bush brown
5. Common Castor
6. Common Cerulean
7. Common Emigrant
8. Common Evening Brown
9. Common Grass Yellow
10. Common Gull
11. Common Indian Crow
12. Common Leopard
13. Common Mime
14. Common Mormon
15. Common Rose
16. Common Sailor
17. Common Sergeant
18. Common Wanderer
19. Denied Eggfly
20. Glassy Tiger
21. Great Egg fly
22. Great Orange Tip
23. Lemon Pansy
24. Mottled Emigrant
25. One Spot Grass Yellow
26. Plain Tiger
27. Psyche
28. Red Helen
29. Slate Flash
30. Small Grass Yellow
31. Southern Birdwing
32. Tailed Jay
33. Tamil Lacewing
34. Tawny Coster

## Birds of Raj Bhavan

1. Ashy Drongo
2. Jungle Babbler
3. Black Wooded Oriole
4. Brahminy Kite
5. Bronze Drongo
6. Common Drongo
7. Common House Crow
8. Common House Swallow
9. Common Iora
10. Coppersmith Barbet
11. Cuckoo Shrike
12. Flower Pecker
13. Golden Oriole
14. Jungle Babbler
15. Common Blue King Fisher
16. White-throated King Fisher
17. Koel
18. Lesser Flameback
19. Orange Headed Ground Thrush
20. Paradise Flycatcher
21. Peacock
22. Red Whiskered Bulbul
23. Rufous Woodpecker
24. Shikra
25. Small Sunbird
26. Swift
27. Warbler
28. White Bellied Sea Eagle
29. White Browed Bulbul
30. White Cheeked Barbet
31. Wire Tailed Swallow

## Reptiles of Raj Bhavan

1. Checkered Keel back
2. Common Bronze-Back Tree Snake
3. Common Indian Cobra
4. Common Kukri
5. Forest Calottes
6. Green Vine Snake
7. Indian Rock Python
8. Rat Snake
9. Russel's Viper
10. Saw Scales viper
11. Striped Keelback
12. Whitaker's Sand Boa

## Mammals of Raj Bhavan

1. Bats
2. Fox
3. Hanuman Langur
4. Indian Palm Civet
5. Mongoose
6. Porcupine
7. Three Striped squirrel



This coffee table book' is intended for guests or visitors to read and appreciate the biodiversity of Raj Bhavan, thus encouraging conversation on the subject and adding to their existing knowledge. The Flora and Fauna of Raj Bhavan is generally visually oriented, the pages consist mainly of photographs accompanied by brief information about the Raj Bhavan and the Biological Diversity. Thus, this book aims at giving information on Flora and Fauna of Raj Bhavan at a glance. The information provided is more basic with less scientific and technical approach to make it reader friendly. Need for this publication was felt for quite some time and the task was handed to Goa Forest department and Goa State Biodiversity Board for preparing a coffee table book on Flora and Fauna of Raj Bhavan, Goa. The intend coffee table book carries information on History of Raj Bhavan, Flora, Birds, Butterflies and Faunal Diversity with a good collection of photographs with their scientific and common names.

The premises harbor rich biological diversity and has lot of scope for further inventories of this rich diversity. It is suggested that one year monitoring is required to prepare scientific and technical report. I took immense pleasure in preparing this book and obliged to H. E. Shree Bharat Vir Wanchoo for giving me this opportunity. I look forward to carry out one year monitoring and scientific inventory if given a chance.

Dr. Nitin S. Sawant  
Member Secretary,  
Goa State Biodiversity Board.

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