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EXPLORER ARTICLE

Common fruiting plants consumed by birds and their medicinal values

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ABSTRACT

The documentation of the medicinal properties of fruiting plants is very important in the contemporary world. There is an increase in diseases which has no permanent cure from allopathic treatment, but it can be cured through natural plant-based medications. In ancient times, every disease was treated with the help of Ayurvedic formulations which had no side effects on humans but now that knowledge is lost due to low interest in plants and urbanization. Other anthropogenic actions like deforestation and pollution have diminished the population of fruiting plants. Keeping the present changing scenario in mind, a literature survey was done to gather information about the medicinal values of some common fruiting plants consumed by birds. The study also recommends the conservation and plantation of fruiting plants in the locality to provide food and medicine to animals and humans.

INTRODUCTION

The interactions between plants and animals are crucial for the smooth running of the ecosystem. Any imbalance may

have drastic effects on the environment. The interrelationships between fruiting plants and birds are one such example that is essential for ecological maintenance.

Plants mainly depend on birds for pollination and seed dispersal and birds get fruits, nectar, etc. as food and shelter from plants. Frugivory is a critical process that plays a major role in seed dispersal which is important for the maintenance and regeneration of forests. It is also an example of mutualistic interdependence affecting the evolution and extinction of several flora and fauna (Schowalter 2006). Some fruiting plants provide only food to birds but some also have medicinal properties that are useful to animals and human beings. For example, *Syzygium cumini* is one of the underutilized fruits that are most preferred by birds as well as humans. It is a medicinal plant that has high nutritive value and is a good source of iron. It is good for diabetic patients and is highly recommended for consumption. It is also used in the treatment of diarrhoea, ulcers, and inflammation (Chaudhary and Mukhopadhyay 2012). There is a wide variety of fruiting plants with medicinal values in India that can be analysed and experimented with in the future to extract pharmaceutical compounds to cure diseases. In the current situation, the available allopathic medicines are not working properly in humans, mainly due to drug failure and anti-microbial resistance (AMR). Thus, there is a dire need for natural cures prepared from plants and different plant

parts against human ailments. Due to anthropogenic activities like deforestation, urbanisation, pollution, etc., and climate change, there is a significant loss in the population of fruiting trees thereby reducing the bird population as well as loss of knowledge of the medicinal values. Therefore, fruiting plants are necessary for the survival of not only birds but all other faunal species and mankind. Keeping the dire situation in mind, a literature survey was done to document the medicinal importance of some common fruiting plants that are preferred by birds. The study also recommends the plantation of more fruiting plants to ensure food and medicine availability to birds and humans.

METHODOLOGY

Viewing the importance of fruiting plants for birds, an extensive literature and field survey (Selected areas of Karnataka-Mysuru & Mandya) were done to list out some common fruiting plants as well as document their medicinal uses. The data was collected from different sources available in various research journals, review papers and news articles.

RESULTS AND DISCUSSION

In the study, the authors listed 10 common fruiting plant species that were preferred by birds for consumption and belonged to 7 families under 9 genera (Table 1). Out of

the 10 fruiting plant species, 2 species each belonged to the family Meliaceae, family Moraceae, and family Rhamnaceae; and 1 species each belonged to the family Anacardiaceae, family Cannabaceae, family Myrtaceae, and family

Phyllanthaceae. These listed plants were also found to have medicinal values and are used by indigenous communities and traditional healers for the treatment of various diseases from common cold and fever to leprosy and cancer.

Table 1: Some common fruiting plants consumed by birds

Scientific name	Common name	Family	Medicinal use	Source
<i>Azadirachta indica</i>	Neem	Meliaceae	Flowers are used in the treatment of diabetes.	Present study
<i>Cipadessa baccifera</i>	Nalbila	Meliaceae	Used in the treatment of diabetes, dysentery, malaria, rheumatism, piles, headache, and psoriasis.	Kavitha et al. (2016)
<i>Ficus benghalensis</i>	Indian banyan	Moraceae	Latex is used to cure skin infections.	Present study
<i>Flueggea virosa</i>	White berry bush	Phyllanthaceae	Used for the treatment of fever, malaria, sexual dysfunction, pain, diabetes, epilepsy, snakebite, venereal disease, rheumatism, rash, diarrhoea, pneumonia, cough, hepatitis, and HIV-related illness, and as a contraceptive.	Al-Rehaily et al. (2015)
<i>Lannea coromandelica</i>	Indian ash tree	Anacardiaceae	Fruits are edible and pulp is used to cure tongue ulcers.	Present study
<i>Psidium guajava</i>	Common guava	Myrtaceae	Tender petioles are used to cure tongue ulcers.	Present study
<i>Streblus asper</i>	Toothbrush tree	Moraceae	Used in the treatment of filariasis, leprosy, toothache, diarrhoea, dysentery, and cancer	Verma et al. (2015)
<i>Trema orientale</i>	Indian charcoal	Cannabaceae	Used in the treatment of diabetes mellitus, oliguria,	Adinortey et al.

	tree		malaria, respiratory, inflammatory, and helminthic diseases.	(2013)
<i>Ziziphus mauritiana</i>	Indian jujube	Rhamnaceae	Fruit powder is used to cure indigestion.	Present study
<i>Ziziphus oenopolia</i>	Wild jujube	Rhamnaceae	Fruit powder is used to cure indigestion.	Present study

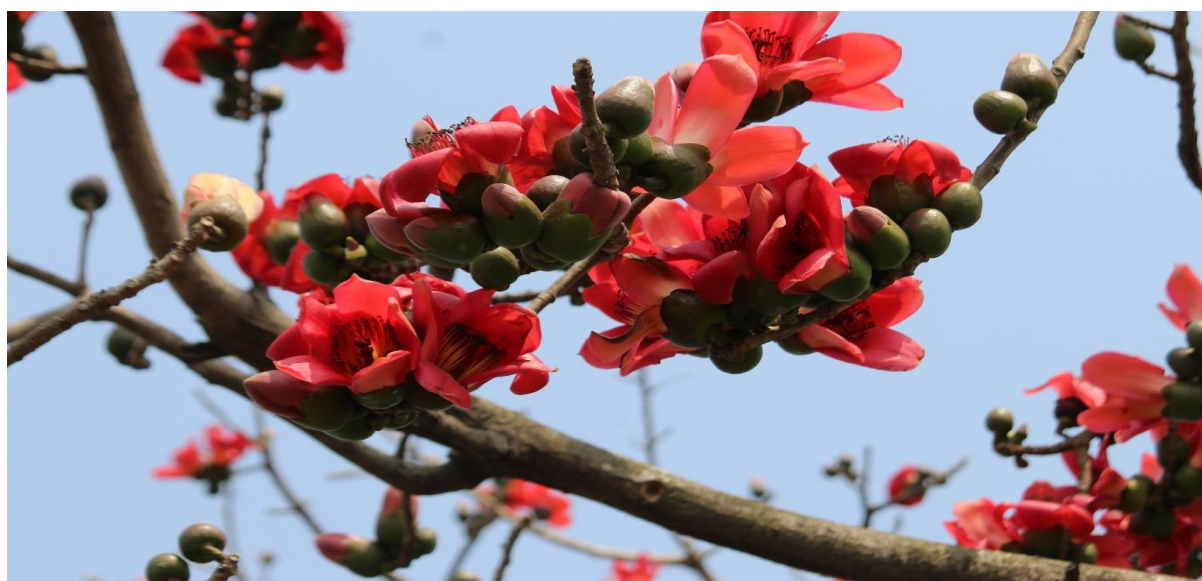


Figure 1: Flowers of *Bombax ceiba*



Figure 2: Vegetative Parts of *Streblus asper*

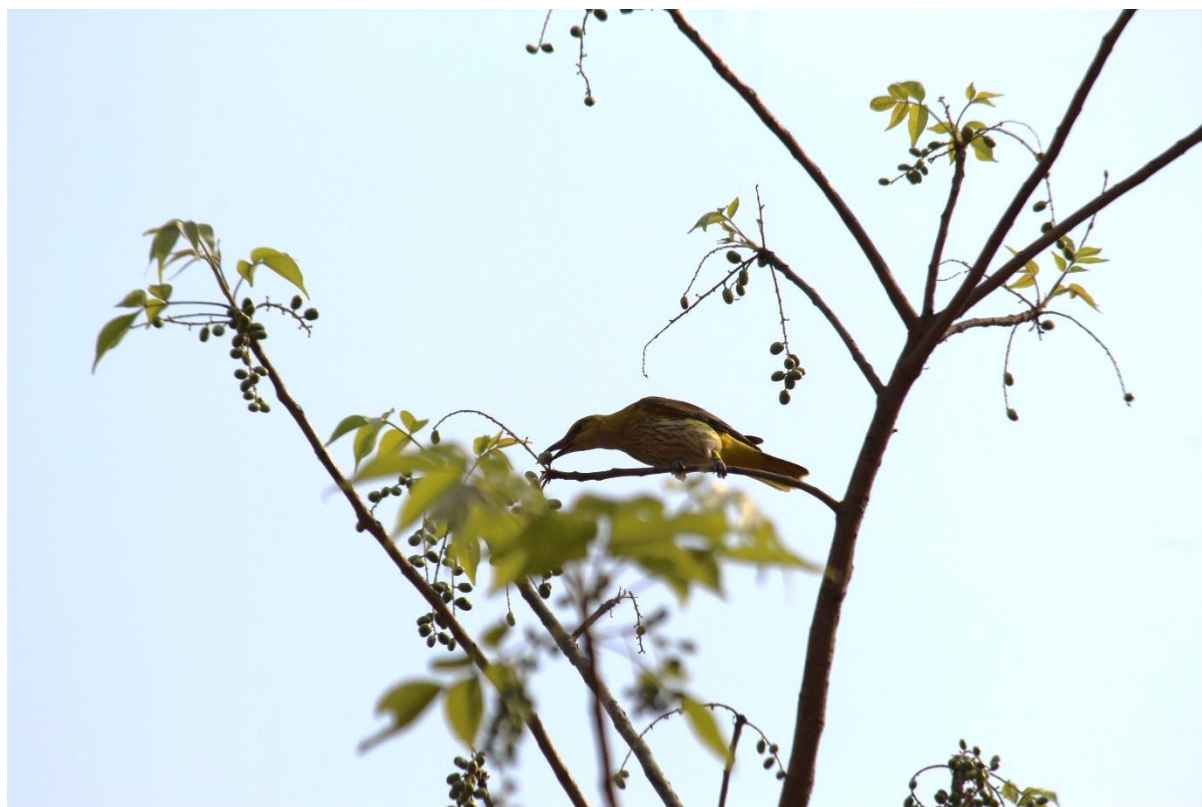


Figure 3: Indian golden oriole feeding on *Lannea coromandelica*

CONCLUSION

The results revealed some fruiting plants preferred by birds for consumption that also have potential medicinal properties used in the treatment of various diseases for human beings. About every plant in the environment has some medicinal value and is an integral part of an ecosystem. The changing environment due to human interference and climate change is impacting the population of flora especially fruiting plants by the loss of their pollinators and seed dispersers. Day by day, mankind is losing the fruiting medicinal plants and the knowledge of their use in curing individuals. Therefore, there is a need to conserve plants and put

more effort into the plantation of more fruiting plants.

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