International Journal of Multidisciplinary Research And Studies

Available online at https://ijmras.com/

INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY RESEARCH AND STUDIES
ISSN: 2640 7272
Volume:03; Issue:04 (2020)

Page no.- 21/21

A STUDY OF THE SURVEY FOR ANGIOSPERMIC FLORA OF YOUR LOCALITY

CHANDANI KUMARI
M.Phil., Roll No. 140101, Session:2014-15
Department of Botany, B.R.A. Bihar University, Muzaffarpur, India
chandanithakur2014@gmail.com

ABSTRACT

These plants are referred to as mesophytes. Eg: Maize. Xerophytes are plants that do well in dry or arid environments, therefore the name describes them perfectly. Eg: Cactus The vast biological diversity that is manifested at all levels of the biosphere, including the genetic, species, and ecosystem levels, is what we refer to when we talk about biodiversity. It offers the vital products and services that are necessary for the continued existence of human beings as well as other creatures that live on our planet. However, the over use of natural resources has led to a precipitous decline in the availability of these bounties provided by Mother Nature. Burning plastics and other materials that release greenhouse gases, burning fossil fuels, releasing CFCs from various sources such as automobile exhausts, air conditioning vents, refrigerators, and other appliances, along with massive deforestation and the destruction of natural topography, have accelerated the rate at which climate change is occurring on a global scale to an alarming degree. These included the plant's habit and habitat, the colour of its flowers and fruits, the date of collection, any local names given to the plant (if any), phenological data, associated plants, the status of any endangered plants, and the type of forest. leaves usually with reticulate venation; blooms tetra-pentamerous, if trimerous then plants woody.

Keywords: Angiosperm, Precipitous, Necessary, Natural

INTRODUCTION

In this realm of living things, the group of plants known as angiosperms is the most advanced and complex. They have roots, stems, and leaves that are all well differentiated, and they also contain vascular tissue that is well developed. The Wolffia is the world's tiniest angiosperm, measuring only 0.1 millimetres in length, while the Eucalyptus regnans tree is the tallest at 130.5 metres (435 feet), and the Ficus benghalensis tree is the biggest. The natural state of an angiosperm is that it is autotrophic; nevertheless, there are certain angiosperms that exhibit a heterotrophic nature and have either a parasitic or a saprophytic method of nourishment. Angiosperms exhibit a clear alternation of a generation, with the saprophytic phase predominating most of the time. Angiosperms can take on one of three distinct shapes and habits, namely those of a herb, a shrub, or a tree. Herbs are plants that are tiny in size and have stems that are tender, fragile, and malleable and have few or no branches.

Eg; Mustard, Bamboo etc. Plants of a medium size that are woody, bushy, and have branches that arise towards the base are called shrubs. Eg; Rose, Marigold etc. Trees are big, almost completely woody plants that have a distinct trunk and branches that emerge at the top of the plant. Angiosperms may be divided into three categories according to their life spans: They die within a few weeks to one year; 2. They die within 2 years; and 3. They can live for more than two years. 1. Annual: They die within a few weeks to one year. 2. Biennial: They die within 2 years. 3. Perennial: They can live for more than two years. It comes in two different flavours. The term "polycarpic" refers to plants that bloom several times throughout the course of their existence, whereas "monocarpic" refers to plants that only bloom once. Angiosperms may be broken down into three categories according to the amount of water they require. Hydrophytes are plants that are able to thrive in conditions when there is an inadequate supply of water. Eg: Lotus. Mesophytes are plants that thrive in conditions where there is an average or moderate amount of water. These plants are referred to as mesophytes. Eg: Maize. Xerophytes are plants that do well in dry or arid environments, therefore the name describes them perfectly.

In the Kangra area, the investigation that had been suggested was carried out with the following goals in mind:

1. To recognise and collect the floral components of the region, as well as to make a permanent record for the purpose of the preservation of specimens

Chandani Kumari *, *University Department of Botany: B.R.A. Bihar University, Muzaffarpur. India*

2. The study of plant species is beneficial in gaining an understanding of the state of specific plant species in the region under investigation.

ANGIOSPERMIC BIODIVERSITY

In order for any location to responsibly exploit its plant resources, a thorough examination of the species variety present there must first be completed. India is one of the top twelve mega-biodiversity centres in the world because it is the meeting place for three of the world's most important biogeographic realms: the Indo-Malayan, the Eurasian, and the Afro-tropical. Additionally, India is home to two of the world's eighteen recognised "hot-spots" for biodiversity: the Eastern Himalaya and the Western Ghats. W. Roxburgh is credited as being the one who first began the systematic study of the flora and fauna of India. In 1833, he published his two-volume work titled "Flora Indica." Following this, between 1872-1897, Sir J.D. Hooker published a seven-volume work titled "Flora of British India," which served as a catalyst for taxonomic research in India. As a direct consequence of this, a number of regional floras emerged within a very short period of time. But beginning in the middle of the 20th century, there was a precipitous decline in the number of floristic activity.

ADDITIONS TO THE ANGIOSPERMS OF THE FLORA

The Millennium Ecosystem Assessment came to the conclusion that over the past fifty years, sixty percent of all ecosystem services, such as the regulation of climate, the protection of watersheds and hazards, and so on, have decreased as a direct result of the expansion of agricultural production, industrial production, forestry practises, and fisheries, among other human activities (Kinzing et al., 2011). Therefore, there is a greater requirement for the preservation of ecosystems. More than twelve percent of the planet's surface is comprised of protected areas (PAs), which include national parks and wildlife preserves. PAs are widely regarded as the most important conservation tool and the vanguard of the worldwide effort to protect biodiversity (Wells & Mc Shane, 2004). The PAs are only successful when there is effective management in place (Khan & Bhagwat, 2010). In today's fast shifting world, monitoring is an essential component of both environmental protection and the management of natural resources (Pertti Saurola, 2008). The role that biodiversity plays in the operations of ecosystems is something that ecologists are attempting to understand (Pedro Flombaum & Osvaldo, 2012). The identification of each group that makes up the ecosystem is the initial and most important stage in the process of learning about the ecosystem.

Chandani Kumari *, *University Department of Botany: B.R.A. Bihar University, Muzaffarpur. India*

GEOGRAPHICAL FEATURES

Climate: The monsoon season typically begins in June and lasts until September. The months of November through February are designated as winter, and during this time the average temperature ranges from 18 degrees Celsius to 25 degrees Celsius. During the monsoon season and during the rest of the year, the relative humidity is at its highest point; nevertheless, it is at its highest point in the morning. During the dry months of May through August, evaporation is at its lowest levels, whereas it is highest during the summer months of January through April. The month of March has the highest average daily rate of 4.8 millimetres, while July sees the lowest average daily rate of 2.6 millimetres.

Soil: Sand loams, laterite, and forest soil are the three basic categories that the soil survey Department uses to categorise the soils of the Kollam area. In general, the soils of Kollam are poor in water-holding capacity, acidic, kaolintic, and gravelly, and they have a gravelly texture. The most significant contributors to soil formation are found to be climate, terrain, vegetation, and hydrological conditions. The capacity of a soil to drain water is another factor that may be used to classify soils. The primary categories range from poorly drained to moderately drained to moderately well drained to poorly drained, relatively widely drained to moderately drained, well drained rocky outcrops. Clayey, clayey-loamy, loamy, rocky patches, and sandy soils are the primary types of soil found in Kollam. These major soil categories are classified according to the composition of the soil.

Irrigation: The district does not have an abundant supply of irrigation infrastructure. Rainfall is the primary source of water for irrigation. Around 2700 millimetres of precipitation is the city of Kollam's yearly average rainfall (110 in.) Both the Southwest and the Northeast monsoons make their way to Kollam. January has the least amount of precipitation of any month, at only 18 millimetres. The annual precipitation totals in Kollam city might range anywhere from 1100 to 1500 millimetres on average. During the monsoon season, the relative humidity in Kollam city is often around about 90%.

OBJECTIVE

1. To Study On The survey for angiospermic flora of your locality
2. To Study On The study of plant species is beneficial in gaining an understanding of the state of specific plant species in the region under investigation.

Chandani Kumari *, *University Department of Botany: B.R.A. Bihar University, Muzaffarpur. India*

REVIEW OF LITERATURE

P. Raja 2015. A study of the flora of the several wetlands found in the Pudukkottai region of Tamil Nadu, India, was carried out between the years of 2012 and 2015. During the course of this investigation, 144 species of angiosperms were recorded. These species belonged to 92 genera and 43 families. The family Cyperaceae had the most species, with 23, followed by the families Poaceae (16), Plantaginaceae (8), Lythraceae and Commelinaceae (7 each), Hydrocharitaceae (6), Leguminosae, Linderniaceae, and Araceae. Acanthaceae was the family with the fewest species, with just six (5 each).

Dantas K.J. 2016. Based on the findings of the floristic investigations that were conducted in the Aralam Wildlife Sanctuary, it has been claimed that a total of 216 species have been added to the flora of the Kannur district in Kerala, India. There are 216 plant species in total, 161 of which belong to the dicotyledon family and 55 to the monocotyledon family. The list contains 109 Peninsular Indian endemics, including 59 endemics that are only found in the southern Western Ghats.

Sujit Kumar Mandal 2017. The purpose of this study is to discuss the findings of a research into the flora found on Joychandi Hill, which is located in the Puruliya District of West Bengal. It has been determined that the Joychandi Hill area is home to a total of 38 species, representing 36 genera, 20 families of dicotyledonous plants, and 6 species, representing 5 genera, 1 family of monocotyledonous plants. This Joychandi Hill has a huge potential for the conservation of plants as well as ethno-botanical purposes as a hilly location in the neighbourhood of Puruliya in the District of Puruliya.

Sasidharan N. and K.V.Binu 2016. Based on the findings of the floristic investigations that were conducted in the Aralam Wildlife Sanctuary, it has been claimed that a total of 216 species have been added to the flora of the Kannur district in Kerala, India. There are 216 plant species in total, 161 of which belong to the dicotyledon family and 55 to the monocotyledon family. The list contains 109 Peninsular Indian endemics, including 59 endemics that are only found in the southern Western Ghats.

Sameer Patil 2021 reports the discovery of 91 new taxonomic groups of angiosperms in the district of Kodagu in the state of Karnataka, India. The specimens were taken from the Pushpagiri Wildlife Sanctuary.

Chandani Kumari *, *University Department of Botany: B.R.A. Bihar University, Muzaffarpur. India*

RESEARCH METHODOLOGY

A specimen should preferably be between 25 and 40 centimetres in length and up to 26 centimetres broad. This will allow it to fit on a normal herbarium mounting sheet that is 42 centimetres long and 27 centimetres wide. This is also around the size that newspapers are. How convenient is that? When pressing plant components that are too large to fit on a single sheet, they can be chopped into portions and pressed on many sheets at once. During the pressing process, specimens that are long and thin like grasses and sedges might be folded once, twice, or even three times. When dealing with very small plants, it is possible to insert many individuals on one sheet. The harvested plant material must first be dried, which is an essential stage in the preservation process. In order to prevent a specimen from becoming brittle or burned and to keep it from losing its colour, the moisture must be removed as quickly as possible. It is recommended that specimens be pressed as soon as possible after being taken from the plant in order to achieve the best possible results.

DATA ANALYSIS

1 Cotyledons often two; leaves usually with reticulate venation; blooms tetra-pentamerous, if trimerous then plants woody.... .... **Dicotyledons**

1 Cotyledon one; leaves typically with parallel venation; blooms trimerous, or drastically reduced s **Monocotyledon**

DICOTYLEDONS

1 Perianth biseriate i.e. distinguished into calyx & corolla ... ...

.. . . 2

1 Corolla often absent; calyx persent or absent; sometimes petaloid and at times in more then one whorl 120

5 Plants aquatic ... ... **Nelumbonaceae**

6 Leaves simple, exstipulate; flowers 3 - merous .. ..

... .**Annonaceae**

Chandani Kumari *, *University Department of Botany: B.R.A. Bihar University, Muzaffarpur. India*

6 Leaves pinnately compound, stipulate flowers 5 merous ... .

.... 6a

6a. Flowers regular..... **Rosaceae**

6a. Flowers irregular, spurred .....**Ranunculaceae**

7 Plats aquatic; petals more than 5; placentas lamellar ... ...

.... **Nymphaeaceae**

7 Plants terrestrial; petals 4-5, rarely more; placentas not lamellar

.... 8 8 Stamens monadelphous 9

8 Stamens not monadelphous 12

9 Ovary 3- many celled, 3- many carpellary; fruit not a legume or a lomentum 10

9 Ovary 1- celled; monocarpellary; fruit a legume or a lomentun ....

... ... **Mimosaceae**

10 Anther 1-celled; pollen echinate ..... **Malvaceae**

10 Anther 2- celled; pollen smooth 11

11 Filaments forming a tube; fertile stamens often alternating with staminodes **Sterculiaceae**

11 Filaments forming a solid column, staminodes absent ... ...

... ... **Lecythidaceae**

12 Sepals 2 or 3 13

12 Sepals 4,5 or more..... 15

Chandani Kumari *, *University Department of Botany: B.R.A. Bihar University, Muzaffarpur. India*

13 Plants with milky or coloured juice; placentas parietal ... ...

... ... **Papaveraceae**

13 Plants with watery juice; placentas free central of basal ... ...

.... 14

14 Flowers terminal, often solitary; seeds numerous ... ...

... . **Portulacaceae**

14 Flowers in axillary clusters; seeds few ..... **Aizoaceae**

15 Ovary superior 16

15 Ovary inferior 27

16 Leaves with pellucid, aromatic glands ..... **Rutaceae**

16 Leaves not gland dotted 17

17 Placentation free - central..... **Caryophyllaceae**

17 Placentation not free- central.....18

18 Placentation parietal or marginal 19

18 Placentation axile.....23

19 Placentation marginal; fruit a legume or a lomentum ... ...

... ... **Mimosaceae**

19 Placentas parietal, fruit not a legume or a lomentum ....

... ... 20

20 Herbs ar shrubs, rarely trees; placentas 2 21

20 Trees; placentas mostly 5 or more.....**Cochlospermaceae**

Chandani Kumari *, *University Department of Botany: B.R.A. Bihar University, Muzaffarpur. India*

21 Herbs; fruit a siliqua .....**Cleomaceae**

21 Shrubs or trees; fruit not as above 22

22 Scandent shrubs or trees; leaves pinnately veined or palmately lobed; fruit fleshy or indehiscent woody .....**Capparaceae**

22 Erect shrubs; leaves palmately veined; fruit 2- valved echinate capsule **Bixaceae**

23 Leaves opposite; sepals 4-8, united into a cup; petals arising from the mouth of calyx cup..... **Lythraceae**

23 Leaves alternate; sepals 5; distinct petals hypogynous ... ...

... ... 24

24 Leaves digitate; flowers large, red; stamens polyadelphous; anthers one celled..... **Bombacaceae**

24 Leaves simple; stamens distinct; anthers 2- celled ... 25

25 Sepals 5, valvate 26

25 Sepals 4 7, imbricate.....**Clusiaceae**

26 Torus brown or yellow; anthers opening by longitudinal slits; ovary entire; style terminal.....**Tiliaceae**

26 Torus red; anthers opening by terminal pores; ovary 5-10 lobed; style gynobasic **Ochnaceae**

27 Plants not succulent; sepals and petals differentiated..... 28

27 Plants succulent spinous; sepals and petals undiffrentiated, all often petaloid**Cactaceae**

28 Leaves aromatic; cells of the ovary not superposed; seeds dry ...

... ... **Myrtaceae**

Chandani Kumari *, *University Department of Botany: B.R.A. Bihar University, Muzaffarpur. India*

28 Leaves not aromatic; cells of the ovary superposed; seeds surrounded by juicy pulp .....**Punicaceae**

29 Gynoecium of one or 2 to 4 distinct carpels 30

29 Gynoecium of 2 to many united carpels 34

30 Flowers unisexual ..... **Menispermaceae**

30 Flowers bisexual 31

31 Carpel one; fruit a legume or lomentum 32

31 Carpels 4; fruit capsular.....**Crassulaceae**

32 Corolla regular ..... **Mimosaceae**

32 Corolla zygomorphic 33

33 Corolla papilionaceous .....**Fabaceae**

33 Corolla not papilionaceous..... **Caesalpiniaceae**

34 Flowers bisexual 35

34 Flowers unisexual or polygamous 72

35 Corolla regular 36

35 Corolla zygomorphic or irregular 66

36 Stamens hypogynous 37

36 Stamens perigynous or epigynous 62

37 Leaves scale like..... **Tamaricaceae**

MONOCOTYLEDONS

1 Perianth well-developed usually in two series of three each ... ...

... ... 2

Chandani Kumari *, *University Department of Botany: B.R.A. Bihar University, Muzaffarpur. India*

1 Perianth reduced scale like or absent 19

2 Herbs; woody twiners or woody-scapigerous plants; leaves various but not palm like or pinnatisect; at least one perianth series petaloid 3

2 Trees or shrubs with palm- like or pinnatisect leaves; both perianth series sepaloid ... ... **Arecaceae (Palmae)**

3 Ovary inferior 4

3 Ovary superior 13

4 Fertile stamens 1 or 2 5

4 Fertile stamens 3 or more 8

5 Stamens and style growing together to form a column; seeds minute, numerous **Orchidaceae**

5 Stamens and style not thus growing together to from a column; seeds rather large... 6

6 Anthers 2- celled 7

6 Anthers 1- celled ....**Cannaceae**

7 Leaves without a solid petiole; seeds more than 3 ... ...

... ... **Zingiberaceae**

7 Leaves with a destinct solid petiole; seeds 3 to 1 ... ...

... ... **Marantaceae**

8 Plants aquatic; placentation lamellar ... ...

... ... **Hydrocharitaceae**

8 Plants terrestrial; placentation not lamellar 9

Chandani Kumari *, *University Department of Botany: B.R.A. Bihar University, Muzaffarpur. India*

9 Plants erect or scapigerous; flowers bisexual; fruit not winged ...

... ... 10

9 Plants twining; flowers unisexual; fruit 3- winged ... ...

... ... **Dioscoreaceae**

10 Plants with well developed pseudostems; inflorescence drooping large with large coloured bracts; fertile stamens 5... ... ...

... ... **Musaceae**

10 Plants scapigerous; inflorescence erect with green or membranous bracts; fertile stamens 6 11

11 Scapes herbaceous or very short; flowers in spathaceous umbels or condensed racemes... 12

11 Scapes woody, often gigantic; flowers in panicled racemes ... ...

... ... **Agavaceae(Yucca, Fucraea)**

12 Leaves large, pedately divided; placentation parietal ... ...

... ... **Taccaceae**

12 Leaves narrow, plicate; placentation axile ... ...

... ... **Hypoxidaceae**

13 Both perianth series petaloid 14

13 Outer perianth series sepaloid, the inner pataloid 17

14 Plants aquatic ..... **Pontederiaceae**

14 Plants terrestriel 15

15 Plants herbaceous or woody; leaves usually thin or atleast not with fibrous bundles 16

Chandani Kumari *, *University Department of Botany: B.R.A. Bihar University, Muzaffarpur. India*

15 Plants woody; leaves with fibrous bundles .....**Agavaceae**

16 Plants climbing by means of tendrils; leaves reticulately veined ...

... ... **Smilacaceae**

16 Plants various; but not tendril climbers; leaves with parallel veins or reduced ... ... **Liliaceae(exc Gloriosa)**

17 Plants terresterial; carpels united, placentation axile ... ...

... ... **Commelinaceae**

17 plants aquatic; carpels distinct, then placentation lamellar ... ...

... ... 18

18 Carpels loosely or closely united; ovules many on lamellar placentas **Butomaceae**

18 Carpels distinct, ovules few on parietal or basal placentas ... ...

... ... **Alismataceae**

19 Flowers not subtended by dry bracts (glumes) 20

19 Flowers subtended by dry bracts (glumes)..... 27

20 Plants monoecious woth staminate flowers above and pistillate below in long terminal spikes; perianth bristle like or scale like ...

... ... **Typhaceae**

20 Plants not showing combination of above characters ... ...

... ... 21

21 Plants submerged or free - floating aquatics 22

21 Plants terrestrial or marsh ..... **Araceae**

Chandani Kumari *, *University Department of Botany: B.R.A. Bihar University, Muzaffarpur. India*

22 Plant body thalloid; free - floating .....**Lemnceae**

22 Plant body well-differentiated into roots, stem and leaves ... ...

... ... 23

23 Plants free - floating.....**Araceae**

23 Plants submerged or emerged and rooted in mud ... 24

24 Flowers bisexual 25

24 Flowers unisexual... 26

25 Stems reduced to a tuberous root stock; perianth segments 1 to3; stamens 6 or more **Aponogetonaceae**

25 Stems elongate; perianth segmens 4; stamens 4 ... ...

.... **Potamogetonaceae**

26 Carpel solitary, sessile; stigmas filiform ..... **Najadaceae**

26 Carpel 1-9, sessile or pedicelled; stigmas peltate ... ...

... . **Zannichelliaceae**

27 Flowers in globose or subglobose involucrate heads; always unisexual, ovary 3- celled, 3 ovuled.....**Eriocaulaceae**

27 Flowers in spikelets, bisexual or unisexual; ovary 1- celled, 1-ovuled

... ... 28

28 Stems solid, usually triangular in section; leaves with closed sheaths; biconvex or 3- angled nut.....**Cyperaceae**

28 Stems mostly hollow, cylindrical or flattened in section; leaves usually with open sheath; fruit a caryopsis... ... ...

... ... **Poaceae (Gramineae)**

Chandani Kumari *, *University Department of Botany: B.R.A. Bihar University, Muzaffarpur. India*

DELPHINIUM Tourn. ex L.

Delphiniun ajacis L., Sp. Pl. 539, 1753; F. B. I. 1: 27,1872. Larkspur.

erect annual herbs that range in height from 30 to 45 cm. leaves that are divided into pinnate lobes. irregular, blue flowers arranged in racemes of increasing length. The uppermost sepal, number 5, is the one that develops into a spur at the base of the sepal. There are numerous stamens, and the filaments are flattened at their bases. Follicles contain a lot of seeds.

HB. No. : 50

Ajay Kumar Sonwani

ANNONA L.

Annona reticulata L., Sp. Pl. 537, 1753; F. B. I. 1: 78,1872. Mall trees, as well as Ramphal. The leaves are elliptic to oblong and acuminate, and they have a dark green colour. Flowers have a greenish yellow colour and are arranged in fascicles that are either axillary or leaf-opposed. Subglobose fruits that are both many-celled and many-seeded. Seeds are silky and dark in colour.

Found naturally in forests but also grown in garden settings. Fls. June-Sept.

August to October, Frs.

HB. No. : 150

Ajay Kumar Sonwani

Annona squamosa L., Sp. Pl. 537, 1753; F. B. I. 1: 78,1872. Sitaphal.

Shrubs and trees of a similar size. Oblong or oblong-lanceloate leaves that are sharp in shape. Flowers with a greenish cast, most of which are leaf-opposed. Fruits that are green and ovoid, tubercled, or protruding areoles that are oval in shape. Seeds that are shiny, brown or black in colour.

Chandani Kumari *, *University Department of Botany: B.R.A. Bihar University, Muzaffarpur. India*

Typically grown with the purpose of producing edible fruit. Flowers and foliage from May to October Seeds have a long history of usage as a pesticide, particularly for the treatment of lice.

HB. No. : 100

Ajay Kumar Sonwani

ARTABOTRYS R. Br.

Artabotrys hexapetalus has six petals (L.f.) Bhandari in Baileya 12: 147 ,1964 Artabotrys odoratissimus R. Br. in Bot. Reg. 423, 1820; F.B.I 1:54, 1872., Annona hexapetala L. f. Suppl. Pl. 270, 1781., Annona hexapetala L. f. Suppl. Pl. 270, 1781., Large glabrous bushes that climb and scramble. The leaves are lanceolate in shape and a glossy dark green colour. Flowers on hooked peduncles ranging from 6 to 10 in number.

Most commonly grown in gardens for the fragrant blooms that they produce. Fls. and Frs. from April through October

The blossoms containing the essential oil that is utilised in the production of fragrances.

Antifertility action can be seen in the leaves.

HB. No. : 399

Ajay Kumar Sonwani

POLYALTHIA BL.

Thw. Enum**.** 398. 1864; F.B.I. 1: 62, 1972 is the scientific name for the plant known as **Polyalthia longifolia** (sonner.). Uvaria longifolia Sonnar. 2:233, t.131, 1782 Voyage of the Indies Ashok. Tall evergreen trees. Leaves oblong, long acuminate, edge undulate. Flowers that have a yellowish green colour, many in number, and arranged in umbellate pendent cymes. ripe carpels that have been barred, stalked, and seeded once.

Chandani Kumari *, *University Department of Botany: B.R.A. Bihar University, Muzaffarpur. India*

Usually found along streets and in either public or private gardens. Fls. & Frs. May-June.

HB. No. : 248

Ajay Kumar Sonwani

CISSAMPELOS L.

Cissampelos pareira L. var. hirsuta (DC.) Forman, Kew Bull. 22:356 in 1963. [Citation needed] hirsuta, C. Ham ex. DC. Syst. 1: 535, 1817. C pareira L. pro parte; F.B.I. 1: 103, 1872. Pahadvel.

Twiner that is tomentose and woody. Leaves circular peltate, cordate. Flowers are green, with male flowers arranged in an s-cyme and female flowers growing on long racemes that are pendulous. Fruits an ovoid drupe, scarlet. The seeds were curled.

Found frequently on hedges. Fls & Frs. june - Oct.

Root is one of the ingredients that goes into Dashmularishta and is utilised extensively across the Ayurvedic system.

HB. No. : 149

Ajay Kumar Sonwani

CISSAMPELOS L.

Cissampelos pareira L. var. hirsuta (DC.) Forman, Kew Bull. 22:356 in the year 1963. hirsuta, or C. hirsuta Ham ex. DC. Syst. 1: 535, 1817. C pareira L. pro parte; F.B.I. 1: 103, 1872. Pahadvel.

Tomentose, and a twiner made of wood. Leaves circular peltate, cordate. Green blooms, with male flowers arranged in an s-cyme and female flowers held on long, pendulous racemes. Fruits an ovoid drupe, scarlet. There was a curvature to the seeds.

Found on hedges often. Fls & Frs. june - Oct.

Chandani Kumari *, *University Department of Botany: B.R.A. Bihar University, Muzaffarpur. India*

The root is an important part of the Ayurvedic system and is included as one of the ingradients in dashmularishta.

HB. No. : 149

Ajay Kumar Sonwani

TINOSPORA Miers.

Tinspora cordifolia (Willd.) Miers in Ann. Meg Nat. Ser. 3, 7: 38, 1851; F.B.I. 1: 97, 1872. Willd., Sp. Pl. 4: 826, 1806. The Menispermum cordifolium species. Guilty as charged, gurich.

Climbing shrubs that are glabrous and have grooves in the bark and filiform roots at the nodes. leaves are cordate at the base and membranous in appearance. Flowers are yellowish and arranged in elongate axillary and terminal racemes; male flowers are fascicled, while the famales are often solitary. Drupes 1-3, red. Seeds oblong or globose.

TINOSPORA Miers.

Tinspora cordifolia (Willd.) Miers was published in the Ann. Meg. Nat. Ser. 3, page 38 in 1851 and on page 97 in the F.B.I. in 1872. Willd., Sp. Pl. 4: 826, 1806. The Menispermum cordifolium species. Guilty as charged, gurich.

Climbing shrubs that are glabrous and have grooves in the bark and filiform roots at the nodes. leaves are cordate at the base and membranous in appearance. Flowers are yellowish and arranged in elongate axillary and terminal racemes; male flowers are fascicled, while the famales are often solitary. Drupes 1-3 are coloured crimson. Oval or globose in shape, the seeds.

It can frequently be seen growing on hedges and trees in wet, shaded areas around streams. Fls. July-Oct. Frs. October-December Fls. July-Oct. Agricultural fields.

The starch that is extracted from the stems is called as "Gurvel Satva," and it

Chandani Kumari *, *University Department of Botany: B.R.A. Bihar University, Muzaffarpur. India*

is a tonic that is utilised in cases of severe diarrhoea and dysentry.

HB. No. : 499

Ajay Kumar Sonwani

STATISTICAL ANALYSIS OF THE FLORA

Table 1 : Showing percentage of Dicotyledonous and Monocotyledonous families, genera and species.

S. No.		Dicots		Monocots	
		No.	%	No.	%
1	Families	113	81.29	26	18.71
2	Genera	434	79.05	115	20.95
3	Species	667	77.74	191	22.26

Table 2 : Showing percentage of families, genera and species of Polypetalae, Gamopetalae, Monochlamydeae &monocotyledons.

S.No.		Families		Genera		Species	
		NO.	%	No.	%	No.	%
1	Polypetalae	65	46.76	213	38.80	342	39.86
2	Gamopetalae	31	22.30	171	31.15	241	28.09
3	Monochlamydeae	17	12.23	50	9.11	84	9.79
4	Monocotyledons	26	18.71	115	20.95	191	22.26
Total		**139**	**100**	**549**	**100**	**858**	**100**

An examination of the data presented in the section under "Statistical Analysis"

Chandani Kumari *, *University Department of Botany: B.R.A. Bihar University, Muzaffarpur. India*

demonstrates that the district of Patna is home to a very diverse and abundant collection of angiospermous flowering plants. There are 858 different plant species, which are classified into 549 different genera and 139 different families. The percentage of dicotyledon families, genera, and species is higher than that of monocotyledons (81.29, 79.05, and 77.72, respectively), which means they dominate monocotyledons. In terms of families, ganera, and species, the proportion of monocotyledons to dictyledons is 1 to 4.25, 1 to 3.49, and 1 to 2.85, respectively.

CONCLUSION

The portion of Madhya Pradesh known as the north-eastern corner is where the Patna district may be found. The Patna district covers a total size of 3701 square kilometres, which may be measured as being 80 kilometres from east to west and 70 kilometres from north to south. Anuppur, which is located in the state of Madhya Pradesh in India, has a latitude of 23.113655 and a longitude of 81.697632.The majority of the district Patna is made up of hills. It has a lovely appearance after a few years and a belt of mixed woodlands have passed. Amarkantak, which is located on the hills of Maical and provides a stunning panorama of the surrounding area, is where the Narmada River begins its journey. Both the River Son and the River Johila have their beginnings in the Maical Hills. The district spans a total area of 3701 square kilometres throughout the surrounding landscape.Along with their potential use in medicine, the angiosperm flora has been the subject of research.

REFERENCES

1. Adanson, M. 1763. Families Des Plantes. 2 Vols. Paris.
2. Adlakha, P.A.; Srivastava, A.K. Sirohi, S.S. & Shara, V.K. 1971. Weed Flora of Ludhiyana. Indian J. Weed Sci. 3: 37-44.
3. Agarkar, D.S. 1969. Enumeration of the plants of Lower Chambal Valley ravines, Madhya Pradesh. Bull. Bot. Surv. India. 11: 398-402.
4. Agrawal, K.C. 1996. Biodiversity. Agro-bios Publication, Bikaner. Agrawal, V.S. 1986. Economic Plants of India. Dehra Dun & Calcutta.

Chandani Kumari *, *University Department of Botany: B.R.A. Bihar University, Muzaffarpur. India*

5. Aitchison, J.E.T. 1869. A Catalogue of the Plants of the Pujab and Sindh. London.

6. Aitchison, J.E.T. 1871. Flora of Hoshiarpur District of the Punjab. J. Linn. Soc. Bot. 11: 17-22.

7. Aiton, W. 1789. Hortus Kewensis. 3 Vols. London.

8. Allardyce, J. 1836. Remarks on the vegetation of the Nilgiris. MadrasJ. Lit. Sci. 4: 67-73.

9. Almeida, S.M. 1990. The Flora of Savantwadi. 2 Vols. Jodhpur. Anonymous. 1997. Flora of West Bengal. Vol. I. Calcutta.

10. Arora, R.K. & Nayar, E.R. 1984. Wild relatives of Crop plants in India. NBPGR Sci. Monogr. No. 9. National Bureau of Plant Genetic Resources, New Delhi.

11. Aswal, B.S. & Mehrotra, B.N. 1994. Flora of Lahaul-Spiti. Bishen Singh Mahendra Pal Singh, Dehar Dun.

12. Ateeque Ahmad S.M. 2016. Baidyanath Kumar and Nandji Kumar 2016. Floristic composition of medicinal plants of Nawada District, Bihar, India Int. J. Curr. Microbiol.App.Sci. 5(6): 806-826.

Chandani Kumari *, *University Department of Botany: B.R.A. Bihar University, Muzaffarpur. India*