

DR.BRR.GOV'T. DEGREE COLLEGE, JADCHERLA

MAHABUBNAGAR -5093001

TELANGANA

DEPARTMENT OF BOTANY



Student Study Project on

TYPES OF SOILS JADCHERLA(M) MBNR (D). TELANGANA.

SUBMITTED BY

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DECLARATION

We are hereby declare that the study project: "A STUDY OF TELANGANA STATE HERBARIUM DR. BRR GOVT COLLEGE, JADCHERLA, MAHABUBNAGAR, TELANGANA" is a record of work done by us under the supervision of Dr. B. Sadasivaiah, Assistant Professor of Botany, Dr. BRR Govt. College Jadcherla, Mahabubnagatr District and that the project has not been previously done by any others in this college and any other college/University.

Date : 27/06/2022

Place : Jadcherla

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CERTIFICATE

This is to certify that the Study project on **A STUDY OF TELANGANA STATE HERBARIUM DR. BRR GOVT COLLEGE, JADCHERLA, MAHABUBNAGAR, TELANGANA** is a bonafide Project work done by III BZC students namely **M.Nagamani, M.Shireesha, M.Thulasi. S.Shireesha, J.Santhosha** under my supervision in **DR.BRR Government College Jadcherla, Telangana.**

Date : 27-06-2022

Place : Jadcherla


(Dr. B. SADASIVAIAH)

Supervisor


Head


External Examiner

INTRUCTION

Seed bank is the feasible . seeds that exit on surface doormen in the soil . get better insights in the population dynamics of inpopulation. soil seed banks show co variation (Fumanal Vitalos 2022). Any Studies on the soil seed bank of can help to control options should be evaluated in view of the age of populations and duration of accumulation of seeds into the soil seed bank. Fumanaland Vitalos studied agricultural fields, pastures, roadsides and few abandoned fields. The soilseed bank of common ragweed in near natural habitat types (meadows on military training areas and ruderal sites along rivers) were studied in n at the BOKU. The aim was to characterizethe soil seed bank of subpopulations of different age and different environmental influencenear to the river Danube to describe the soil seed bank of experimental plots in an intensiveon Studies on the soil seed ba can help to get better insights in the populationdynamics of invading populati soil seed banks show considerable spatial variat.

Any control options should be evaluated in view of the age of populations and duration of accumulation of seeds into the soil seed bank. Farumula and Vitalos studied agricultural fields, pastures, roadsides and few abandoned fields. The soilseed bank of common ragweed in near natural habitat types (meadows on military training areasand ruderal sites along rivers) were studied in 2011 at the BOKU. The aim was twofold: a) to characterizethe soil seed bank of subpopulations of different age and different environmental influencenear to the river Danube, and b) to describe the soil seed bank of experimental plots in annear to the river Danube, and b) to describe the soil seed bank of experimental plots in andynamics of invading populat soil seed banks show considerable Studies on the soil seed bank can help to get better insights in the populationspatial vari s. Any control options should be evaluated in view of the age of populations and duration of accumulation of seeds into the soil seed bank. Fumanaland Vitalos studied agricultural fields, pastures, roadsides and few abandoned fields.

The study of seed banks in global karst regions can predict the future of degraded ecosystem restoration, considering that aboveground vegetation is often established from the germination and growth of seeds in soil seed banks. Moreover, the data from the study on seed banks can be applied to quantify the relationships between species diversity in seed banks and aboveground vegetation. Although the compositional vegetation–seed bank dissimilarity identified in many studies indicates that a sizeable share of seed bank diversity is not represented aboveground, the seed banks responsible for the assembly of aboveground vegetation remain an important topic in ecology (. Seed banks are often classified into two (transient and persistent) or three (transient, short-term and long-term persistent) categories based on their annual dynamics and dormancy, according to the comparison of autumn and spring seed. According to the categories of seed banks, ecologists have conducted many studies on the similarity between seed banks and aboveground vegetation and the effects of different types of disturbance and management practices on seed banks. Recent years, qualitative and quantitative studies of seed banks have included more detailed classifications, germination patterns, spatiotemporal patterns of seed banks and mechanisms underlying the persistence of seed banks.

The elucidation of the dynamics of seed banks with plant community succession can provide knowledge for the restoration of degraded ecosystems, which is an important research hotpot. The dominant paradigm of “declining seed numbers and diversity and decreasing similarity between seed bank and vegetation as succession proceeds”. A review based on 108 articles published between 1945 and 2006 indicates that the standing vegetation and its associated seed bank are least similar in forests, intermediately similar in wetlands and most similar in grasslands among the three studied ecosystems). This review supports the dominant paradigm because grasslands are generally considered early succession stages, whereas forest are considered to represent later

succession stages in humid). Recently, ecologists have finished many studies on the dynamics of seed banks, almost all of the results of which conform to the dominant paradigm with only a few exceptions). In karst regions, previous work has primarily focused on the seed survival ratio,

vegetation regeneration, seasonal variation, and the correlation of seed banks with the competitive dominance of plants for the evaluation of the recovery potential of vegetation in grasslands or degraded karst forests (systematic studies on the dynamics of seed banks at different depths with plant community succession in global karst regions). The study of seed banks along a complete chronosequence of succession can reveal whether the patterns of seed banks in karst landscapes conform to the dominant paradigm widely accepted by ecologists. It can also clarify the variations in seed banks at different depths.

Karst landscapes develop from the dissolution of soluble rocks, such as limestone, dolomite and gypsum, and are often associated with intense Anthropogenic activities such as extensive farming and animal grazing , corrosion and erosion cause high proportions of bare rock and shallow, discontinuous soils). These bare rocks are very smooth due to long-term corrosion, and vegetation is often distributed in habitats with shallow, discontinuous soils). The karst landscapes in China, mainly centered in Guizhou Province, represent the largest continuous karst region in the world (In the region, the areas of carbonate rock outcrops cover 150 thousand square kilometers, and this stressful environment limits normal plant growth (It is very difficult to restore forest vegetation in these karst landscapes, and forest

Restoration is often dependent on soil seed banks (The understanding seed banks at different depths in karst landscapes not only fills a gap in the information on the horizontal and vertical variation of seed banks with plant community succession in these global fragile ecosystems but also provides knowledge for the restoration of degraded karst ecosystems. In addition, numerous studies have indicated that the loss of plant species in vegetation greatly impairs ecosystem functions and results in ecosystem instability. Diverse vegetation can play a great role in the maintenance of habitat sustainability, stability, and resistance to disturbance. Through the study of seed banks and the corresponding aboveground vegetation, the relationships between plant diversity in aboveground vegetation and in its associated seed banks can be revealed. Based on these relationships, ecologists can indirectly evaluate potential ecosystem functions, sustainability and stability at the studied sites).

Many ecologists have indicated that when the seeds of a plant species miss the germination season with suitable conditions, the seeds lose viability, and only transient seed banks of that plant species then (Becker et al. 2022) but persistent seed banks. In practice, plant species that appear only before field seed germination and not after field seed germination are considered to exhibit transient seed banks, while plant species that are present both before and after field seed germination exhibit persistent seed; t species with transient and persistent seed banks but to elucidate the dynamics of seed banks along a series of succession stages both before and after field seed germination.

We put forth the following hypotheses: (I) the dynamics of seed banks along one chronosequence of secondary succession in a karst landscape conform to the dominant paradigm of “declining seed numbers and diversity and decreasing similarity between seed bank and vegetation as succession proceeds.”, although The chronosequence is distributed in a karst landscape with unique hydrological and geological conditions; and (II) when high plant diversity is observed in aboveground vegetation along the chronosequence of secondary succession, there will also be high plant diversity in the seed banks corresponding to the aboveground vegetation due to the effects of the aboveground vegetation seed sources. To test these two assumptions, we selected a complete chronosequence of secondary succession in central Guizhou Province and investigated the aboveground vegetation. Then, soil samples were collected before and after field seed germination to test seed density and species richness in seed banks via germination methods. The objective of the study was to reveal the dynamics of seed banks along a plant community succession series in a karst region and then

total species richness in seed banks and the species richness of shrubs, vines and trees increase with increasing species richness of aboveground vegetation. The decreasing species composition similarity between aboveground vegetation and seed banks with the succession of plant communities implies that the natural recovery of degraded ecosystems to relatively stable stages such as SEBF and PEBF is dependent on species

dispersal from outside area. High plant diversity in aboveground vegetation is beneficial to the maintenance of plant diversity in seed banks.



Study area

We sampled vegetation and seed banks in secondary succession stages of approved by Administration Bureau of Two Lakes and One (B.R.R college in garden Reservoir college). Collected by (month 3 | 24|2022).uiyang is characterized by a mid-subtropical humid monsoon climate. The average annual rainfall is. The average annual temperatures range from 13 to 15 °C. The different stages of secondary succession include primitive evergreen broadleaf), secondary evergreen of secondary succession are among the most typical vegetation types in the karst landscape of China. PEBF is a primitive type of forest that is not significantly influenced by anthropogenic disturbance. SEBF is a secondary type recovered after the intermediate cutting of PEBF. In TVSF, vines and plants with thorns are relatively more abundant than in SF, and most of the plants in the two forest types are short. SGC-I and GC-I are more influenced by grazing plant height is relatively short. In all these stages

Study areas hes collected by vemula , mahaboob nagar farest , brr collegegarden and nallamalla farest different soils, of taken the defferent areas,



REVIEW OF LITERATURE

DEFINATION

A literature review surveys ebooks, scholarly articles, and any other sources relevant to a particular issue, area of research or, theory, and by so doing provides a distinction, summary, and critical evaluation of these works in relation to the research problem fits within a larger field of study

Importance of a good literature review

Information of the source, but a synthesis is a reorganization, or a reshuffling, of that information in a way that informs how you are planning to investigate a research problem. The analytical features of a literature review might;

Give a new interpretation of old material or combined new with old interpretation,

Trace the intellectual progression of the field, including major debates,

Depending on the situation, evaluate the sources and advise the reader on the most pertinent or relevant research, or

Usually in the conclusion of a literature review, identify where gaps exist in how a problem has been researched to date.

THE PURPOSE OF A LITERATURE REVIEW IS TO;

Place each work in the context of each contribution to understanding the research problem being studied.

Describe the relationship of each work to the other under consideration.

Identify new ways to interpret prior research

Reveal any gaps that exist in the literature.

Resolve conflicts amongst seemingly contradictory previous studies.

Identify areas of prior scholarship to prevent duplication of effort.

Point the way in fulfilling a need for additional research.

Locate your own research within the context of existing literature.



Consideration of prior, relevant literature is essential for all research disciplines and all research projects. When reading an article, independent of discipline, the author begins by describing previous research to map and assess the research area to motivate the aim of the study and justify the research question and hypotheses. This is generally referred to as the “literature review,” “theoretical framework,” or “research background.” However, for a literature review to become a proper research methodology, as with any other research, follow proper steps need to be followed and action taken to ensure the review is accurate, precise, and trustworthy. As with all research, the value of an academic review depends on what was done, what was found, and the clarity of). Depending on the purpose of the review, the researcher can use a number of strategies, standards, and guidelines developed especially for conducting a literature review. Then, when should a literature review be used as a research method

For a number of research questions, a literature review may be the best methodological tool to provide answers. For example, reviews are useful when the researcher wants to evaluate theory or evidence in a certain area or to examine the validity or accuracy of a certain theory or competing theories). This approach can be narrow, such as investigating the effect of or relationship between two specific variables, or it can be broader, such as exploring the collective evidence in a certain research area. In addition, literature reviews are useful when the aim is to provide an overview of a certain issue or research problem. Typically, this type of literature review is conducted to evaluate the state of knowledge on a particular topic. It can be used, for example, to create research agendas, identify gaps in research, or simply discuss a particular matter.

Literature reviews can also be useful if the aim is to engage in theory development). In these cases, a literature review provides the basis for building a new conceptual model or theory, and it can be valuable when aiming to map the development of a particular research field over time. However, it is important to note that depending on the goal of a literature review, the method that should be used will vary.

a 2.1. Different approaches to conducting literature review

As mentioned previously, there are a number of existing guidelines for literature reviews. Depending on the methodology needed to achieve the purpose of the review, all types can be helpful and appropriate to reach a specific goal (for examples, please see). These approaches can be qualitative, quantitative, or have a mixed design depending on the phase of the review. In the following, three broad types of methods commonly used will be described, as summarized in [Table 2](#). The broad types that will be presented and discussed include the systematic review, the semi-systematic review, and the integrative review. Under the right circumstances, all of these review strategies can be of significant help to answer a particular research question. However, it should be noted that there are many other forms of literature reviews, and elements from different approaches are often combined. As these approaches are quite wide, it should be noted that they might require further adaptation for a particular research project.

Literature reviews play an important role as a foundation for all types of research. They can serve as a basis for knowledge development, create guidelines for policy and practice, provide evidence of an effect, and, if well conducted, have the capacity to engender new ideas and directions for a particular field. As such, they serve as the grounds for future research and theory. However, both conducting a literature review and evaluating its quality can be challenging, which is why this paper offers some simple guidelines on how to conduct better, more rigorous literature reviews and, in the long run, simply better research.

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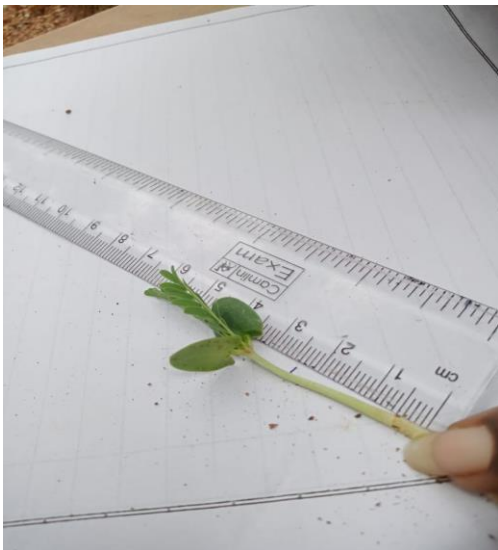
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METHADOLAGY

Binocular stereomicroscope. Twenty seeds of each species were mixed with of soil minimum soil wait the 15 kg extracted soil came from a place near the laboratory without seeds of species present in. Soil samples were mixed with a saturated sodium chloride solution as explained above and seeds were identified from soil using a binocular stereomicroscope. The percentage of seed recovery for each species was estimated randomly.

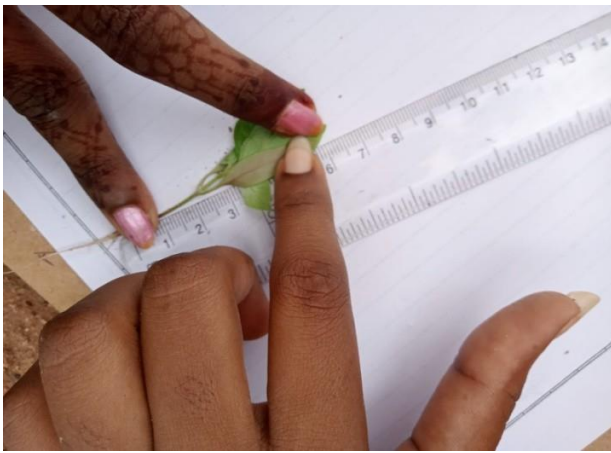
Were weighed and their length was measured under a binocular stereomicroscope. Twenty seeds of each species were mixed with 150 g of soil extracted soil came from a place near the laboratory without seeds of species present in the grassland community. Soil samples were mixed with a saturated sodium chloride solution as explained above and seeds were identified from soil using a binocular stereomicroscope. The percentage of seed recovery for each species was estimated (BRR COLLEGE) in garden soil 15kg's, collected soil depth in 15 cm.

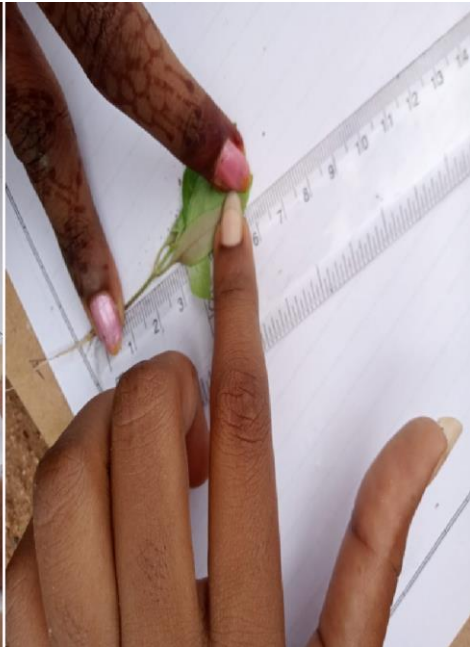
Next soil VEMULA wet black soil collected the 14 kg's and depth 15cm 4-said taking the soil ..

Collected the next soil in NALLAMALA FOREST depth 15cm , 11kg's ,4-said.

Next soil the collected by mahaboob nagar forest in mayori all soils collected by (GROUP MEMBERS)

Take some bricks and rocks a place and take
brick” s and kept around that soils take as walls,waterd soils take some kgs soil
full fill the soils after a few days
Some weed plants are grown that soil remove some weed plants , the soil and
observe the lenth of that veed plants week to week .





RESULTS

s.no	Name of the species	Nallamalla soil	Vemula soil	Brr college	Mahaboob Nagar
1	<i>Hyptis suaveoleus</i>	-	+	+	+
2	<i>Brachiaria ramosa</i>	+	+	+	+
3	<i>Heteropogon centortus</i>	+	+	-	+
4	<i>Aristida adsensionis</i>	+	+	-	+
5	<i>Aristada funiculate</i>	+	+	-	+
6	<i>Blepharis repeus</i>	+	-	-	-
7	<i>Euphorbia hirta</i>	-	+	+	+
8	<i>Euphorbia heterophylla</i>	-	-	+	-
9	<i>Cleorne viscosa</i>	-	+	+	+
10	<i>Euphorbia hysopifolie</i>	-	-	+	-
11	<i>Digitaria ciliaris</i>	+	+	+	+
12	<i>Eypescyperus rotun</i>	+	+	+	+
13	<i>Albizia amara</i>	+	-	-	+
14	<i>Anogeissus latifolia</i>	+	-	-	+
15					

S. NO	Time period	Nallamalla	Vemula	Brr college	Mahaboob nagar
1	1 week	-	-	-	-
2	2 week	-	1,2	1,2	-
3	3 week	1,3,6	1,2	1,2,7,8	-
4	4 week	1,3,6,7	1,2,3,	3,7,8,	1,2
5	5 week	6,7,	2,3,4,	8,9,10,	2,3,4,
6	6 week	8,9,10	4,5,6,	10,12,13,	4,5,6
7	7 week	10,12	6,9,10	13,15,17,	6,8,9,
8	8 week	12,14,	10,11,13	17,18,	9,10,13,
9	9 week	12,13,14,	13,12,14,	18,20,	13,15,16,
10	10 week	14,16,17,	13,14,	20,22,	16,18,19

CONCLUSION

Types of soils collecting the different soils , water that soils of after a few days some weed plants are grown that soil . remove some weed plants and observe the length of that weed plants week to week ,. and note them..