



# " Harmony in Spaces : Blending Heritage , Nature and Design "

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# 24 JANUARY 2024



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# FOSTERING AWARENESS FOR DIPTEROCARPUS SEMIVESTITUS IN UITM PERAK BRANCH, SERI ISKANDAR CAMPUS

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## ABSTRACT

This research paper explores the survival of Dipterocarpus semivestitus (Keruing Padi), which is critically endangered in UiTM Perak Branch, Seri Iskandar campus, Malaysia as immediate preservation action is required. The purpose of this study is to raise awareness among students and others about the need to preserve Dipterocarpus semivestitus. It is important to understand the impact of disturbances, the species' preservation status, and potential threats as it need to highlight the critically endangered status of the species and the immediate need for preservation efforts. The objective is to raise awareness and sense of responsibility for this species among the UiTM Perak Branch, Seri Iskandar campus students. The methodology is numerical analysis of data collected through questionnaires and surveys. The findings will help to preserve Dipterocarpus semivestitus's habitat and ecological significance by offering insightful information about the species' preservation status and the urgency of preservation efforts. To sum up, raising awareness of Dipterocarpus semivestitus preservation is essential if we are to minimize the effects of disturbances, comprehend the species' vulnerabilities and possible threats, and safeguard its habitat.

**Keywords:** Awareness, Keruing Padi, Endangered species, Dipterocarpus semivestitus, UiTM Perak

#### INTRODUCTION

A vital goal is being carried out in the verdant landscapes of Seri Iskandar campus: raising awareness of Dipterocarpus semivestitus, an essential part of the area's biodiversity. This native species, which is distinguished by its enormous size and unusual semi-vested bark, is essential to preserving the ecological balance of the surrounding area. Researchers work to create a viable future where D. semivestitus, a magnificent species will thrive and contributes to the general resilience and health of the local ecosystem by fostering a sense of responsibility and connection to this critically endangered species.

### LITERATURE REVIEW

#### **Endangered Species Plants in Malaysia**

For Malaysia's rich flora to be preserved and managed sustainably, it is vitally important that people are informed of the country's endangered plant species. According to Kiew & Chung-Lu., (2020), invasive species, habitat degradation, human activity, and other factors pose serious threats to Malaysia's plant endangered species. For instance, Malaysia's Klang Gates Quartz Ridge is home to a distinctive and varied flora, including a sizeable proportion of endemic species, some of which are designated as Critically Endangered and Endangered. In addition, 35 Dipterocarpaceae species are listed as endangered by the Malaysian Plant Red List of Peninsular Malaysia, and 15 of these species are listed as critically endangered, emphasizing the fragile status of these plant species (Conservation of the Critically Endangered Tree Species Dipterocarpus semivestitus in Malaysia, 2013)

According to Kim et al., (2022), concern has been raised about the preservation of threatened plant species in wetlands, especially considering human activities and habitat disruptions. Due to human-caused wetland disturbances increase the likelihood of extinction, conservation strategies must be established to mitigate the threats that endangered wetland plants faced. This highlights the urgency of educating people about the conservation status and habitat preservation of these species. Additionally,

research in agro-ecological zones has focused on the domestication and conservation of endangered medicinal flora, emphasizing the noteworthy impacts of different treatments on plant characteristics (Fawad, 2022). To ensure the sustainable use and long-term survival of endangered medicinal plants, it is essential to comprehend the practices involved in domestication and conservation.

Research has focused on the conservation and diversity of plant species in special ecosystems, like dry valleys, highlighting the extremely diverse concentration of endemic plant species in these areas (Zhao & Gong, 2015). Preserving the region's botanical legacy and reducing the risk of extinction depend on the conservation of local endemic plant species in distinctive ecosystems. To address the conservation challenges faced by Malaysia's endangered plant species, there must be an urgent need for increased awareness, conservation strategies, and the preservation of genetic diversity. Fostering a culture of conservation and ensuring the long-term survival of endangered plant species requires an understanding of the landscape context, mitigation of human-caused environmental activities, and the implementation of effective conservation measures.

#### D. semivestitus species in Malaysia

The critically endangered Dipterocarpus semivestitus or well known as Keruing Padi tree is species in Malaysia as it important for both ecology and conservation. According to Bubel et al., (2021), the species primarily favours locations that are higher in elevation, have more slope inclination, light availability, and particular soil conditions. To find appropriate habitats and put conservation measures in place to guarantee D. semivestitus's survival in the face of growing threats to its natural habitat, it is essential to comprehend these ecological preferences. For the conservation and sustainable management of the critically endangered D. semivestitus plant, an understanding of its habitat is essential. This methodology can be modified to evaluate the habitat needs and restoration potential of D. semivestitus, thereby aiding in the formulation of efficacious conservation tactics (Cayton et al., 2023)

The significance of creating administrative level nature reserves to safeguard endangered plant species and their habitats is demonstrated by in

situ conservation initiatives for Cinnamomum mairei H. Lév in China (Qi et al., 2022). In order to preserve D. semivestitus's habitat and ecological significance, this approach can offer insightful information about the creation of protected areas and conservation strategies. To evaluate the possible effects of climate change on floodplain ecosystems, projections from hydrological and climate models are integrated into the multi-source uncertainty analysis used to simulate floodplain inundation under climate change (Maier et al., 2018). To develop conservation strategies that are resilient to climate change, it can be helpful to comprehend the possible effects of climate change on the habitat and resilience of D. semivestitus ecosystems.

#### **Conservation Status and Threat of D. semivestitus**

Understanding the ecological significance and difficulties faced by D. semivestitus in Malaysia requires an understanding of its conservation and threat status offered a thorough summary of D. semivestitus's range, habitat, state of conservation, physical traits, and threats. The study underlined the species' critically endangered status and the pressing need for conservation efforts to ensure its continued existence (Liliwirianis et al., 2013). The impact of shade on the physiology and leaf structure of tree seedlings from a mixed dipterocarp forest was investigated by (Ashton et al., 2011). The study shed important light on the anatomy and physiology of leaves in various tree species, including dipterocarps, even though it did not specifically address D. semivestitus. For evaluating ecological adaptations and responses to environmental threats, it is essential to comprehend the physiological and anatomical characteristics of tree species as this knowledge can be applied to the conservation efforts for D. semivestitus.

According to Leng Guan & Yen Yen, (2022), in Peninsular Malaysia, the primary risks to Dipterocarpus species were include their narrow distribution patterns, shifting land-use patterns, growing demand for forestry products, and past interactions between natural selection, climatic change, soil changes, and geological changes. According to IUCN (2022), these elements underpin the necessity of conservation efforts by contributing to the endangerment of a considerable number of Dipterocarpus species in Peninsular Malaysia. Due to the habitat degradation and lack of general knowledge and awareness among the community are the main risks of D. semivestitus extinction, protecting the remaining species will be the most effective conservation strategy for this critically endangered species. To guarantee the sustainability of this species, government organizations like the State Forest Department, non-governmental organizations, and other conservation bodies should collaborate to ensure the continuity of conservation initiatives beyond short-term projects, making a lasting impact on Dipterocarpus conservation (Conservation of Endangered Species, 2012).

The classified D. semivestitus as a threatened species in the IUCN Red List assessment and to stop the population of D. semivestitus from declining any further, targeted conservation measures are urgently needed (IUCN, 2022). The IUCN Red List assessment offers a standardized and authoritative evaluation of the conservation status of species, guiding conservation efforts and policymaking. To sum up, research and conservation efforts must focus on D. semivestitus's conservation and threat status in Malaysia. The IUCN Red List assessment by (Ashton et al., 2011) and the thorough overview by (Liliwirianis et al., 2013) offer important insights into the state of D. semivestitus conservation and the urgency of conservation efforts. Furthermore, the research conducted by Ashton et al., (2011) regarding the impact of shade on the physiology and leaf structure of tree seedlings provides pertinent information about the physiological adaptations of various tree species, which can guide conservation plans for D. semivestitus.

## METHODOLOGY

#### Site Study Area

The study was conducted in UiTM Perak Branch, Seri Iskandar campus (Figure 1). From the recent information gathered, there are six nos. of D. semivestitus located in zone Forest 1 that was approximately 0.13km2 thus far and the condition of the species is quite deteriorated day by day due to the habitat disturbance. Recent activities that have been held was Department of Landscape Architecture and Green Campus Unit 4 team with companion of Auxiliary team was conducting a revisit survey of D. semivestitus on campus. Ten employees participated in the survey, which was carried out on November 15, 2023, at 9:00 a.m. under the guidance of campus arborist

Lar. CA. Dr. Helmi Hamzah. The condition of six nos.

D. semivestitus has been examined and reevaluated during the revisit. This revisit study will be carried out on a regular basis to gradually monitor this endangered species, which is important on campus ecosystem.



a) Location Plan

b) Forest Zone 1

Figure 1. Study of Location (UiTM Perak Branch, Seri Iskandar campus) Source: Google Earth (2023)

### Population and Sampling

The primarily perceived population are the students at Seri Iskandar campus. Therefore, the students at campus are considered as the target population of the study for this convenience sampling. Total of 50 students that randomly selected were constituted to the sample size (Table 1).

Table 1. Se	lection of p	opulation	and sample	size of the	e respondents
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Population of students in campus	No. of respondents (Sample)
12,000 (Source: UiTM Perak website)	50

#### **Data Collection**

All the data are collected using Google form questionnaire. The variable was categorised into section and arrange from respondent profile, general knowledge of D. semivestitus and awareness and preservation approach at campus.

### **Research Instrument**

This study uses a quantitative research method with the objective of

measuring and analysing the Seri Iskandar campus students' awareness and knowledge levels regarding D. semivestitus. The results will offer important insights into the efficiency of initiatives focused on fostering awareness.

#### **Data Analysis**

The raw data that had been gathered was carefully reviewed to look for errors and inaccuracies. To analyse the data, Excel apps computer programme was utilised to extract the quantitative data. The variables were categorised and described using a variety of descriptive statistical measures, including range, frequency, percentage to get the definite and accurate results.

## **RESULT & DISCUSSION**

For the purpose of analysing how respondents' preferences varied during the survey, demographic data (N = 50) was collected. In term of gender, most of the respondent are female with 54% (N = 27) followed by male with 46% (N = 23). Meanwhile majority of the respondent come the from age group: 21-23 that equivalent to 66% (N = 33) of the total respondent at campus (Table 2).

Parameter		No. of respondent (N=50)	Relative Frequency (%)
Gender	Male	23	46
	Female	27	54
Age	18 - 20	7	14
	21 - 23	33	66
	24 - 26	7	14
	27 - 30	3	6

Table 2. Demographic Profile

(Source: Authors, 2023)

#### Respondent General Knowledge of D. semivestitus

Table 3 shows the results of the survey on student general knowledge about D. semivestitus at campus before taking the survey are point to a sizable knowledge gap. In the survey that was part of this research, an overwhelming 72% (N = 36) of respondents does not acknowledge anything

about this species. Moreover, 44% (N=22) respondent does not sure that D. semivestitus are critically endangered species according to IUCN but 48% (N = 24) agreed that website are the main sources of information about knowing that D. semivestitus is critically endangered and 30.7% (N = 32) agreed that rapid development is the primary reasons that contribute to the critically endangered status of D. semivestitus.

This result indicated that lack of Information about the species existence as respondent may find it challenging to discover and learn about D. semivestitus if there is not much information available about it in campus billboard. The percentage highlight that significant number of responders don't even know that a species exists on campus, let alone that it is highly endangered as most of the respondent have limited exposure on how critically endangered species.

Discussion	Agreement	No. of respondent (N=50)	Relative Frequency (%)
Awareness of <i>D.</i> semivestitus	Yes No	14 36	28 72
General knowledge of critically endangered <i>D.</i> <i>semivestitus</i>	Yes No Not sure	13 15 22	26 30 44
Sources about <i>D.</i> semivestitus	Newspaper Television Social media Website None of above	6 6 11 24	12 12 22 48
Primary reason contributes to criticallyendangered status(multiple choice answer)	Deforestation Habitat degradation Logging Rapid development	20 28 24 32	19.2 26.9 23.2 30.7

Table 3. General knowledge of D. semivestitus before taking survey

(Source: Authors, 2023)

### Respondent Familiarity toward D. semivestitus

Table 4 shows 74% (N = 37) respondents are not familiar with this endangered species followed with 26% (N = 13) stated that respondent is familiar. For the physical characteristics, 44% (N = 22) respondents knew that this species have large size of tree. This result shows that the respondents

only knew about the basic physical characteristics of tree as large size of tree could indicate any other tree species. Thus, it can be concluded that three quarters of the respondent really does not have any familiarity toward *D. semivestitus*.

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Discussion	Agreement	No. of respondent (N=50)	Relative Frequency (%)
Familiarity of <i>D. semivestitus</i>	(1)Not familiar at all (2)Slightly not familiar (3)Moderately familiar (4)Slightly familiar (5)Very familiar	14 23 8 5 0	28 46 16 10 0
Physical characteristic of <i>D. semivestitus</i>	Large size Rough grey and brown bark Elliptical or oblong glossy leaves Straight and cylinder trunk	22 15 19 11	44 30 38 22

Table 4. Respondent familiarity of D. semivestitus

(Source: Authors, 2023)

### Location of D. semivestitus

Due to D. semivestitus is a species that only exist in Seri Iskandar campus and is critically endangered, 48% (N = 24) respondent stated that not sure of the species whereabouts and 30% (N = 15) also stated no which mean they never know the whereabout and never encountered the species in campus. These finding indicate that respondent are not aware about the species whereabout in campus (Table 5). There should be insufficient endeavours to spread information regarding the species so people might continue to be in the dark about its existence.

fable 5. Responde	nt come across	s with D.	semivestitus	in	campus
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Discussion	Agreement	No. of respondent (N=50)	Relative Frequency (%)
Come across with	Yes	11	22
<i>D. semivestitus</i>	No	15	30
in campus	Not sure	24	48

(Source: Authors, 2023)

### **Current Awareness Level**

Based on Table 6, 80% (N = 40) of respondents are not aware of the preservation approach that have been going on in campus, but 92% (N =

46) respondent agreed that it is important to actively engage in preservation effort of D. semivestitus. This concludes that eventhough respondents are not aware about the preservation effort, but the respondents know that this endangered species must be protected at all costs because it is important to let other people know the existence of this species to prevent extinction as preventing the extinction of endangered species is important to balance the ecosystem. When a species disappears, extinction may be irreversible and potential catastrophic consequences for ecosystems and future generations might arise.

Discussion	Agreement	No. of respondent (N=50)	Relative Frequency (%)
Preservation awareness of <i>D. semivestitus</i> in campus	(1)Not aware at all (2)Slightly not aware (3)Moderately aware (4)Slightly aware (5)Very aware	23 17 7 2 1	46 34 14 4 2
Importance to actively engage in preservation effort of <i>D. semivestitus</i>	(1)Not important at all (2)Slightly not important (3)Moderately important (4)Slightly important (5)Very important	0 4 2 13 31	0 8 4 26 62

Table 6. Current preservation awareness level

(Source: Authors, 2023)

#### **Implementation of Campus Policies**

Table 7 shows 92% (N = 46) respondent agreed that campus must implement the policies to prioritize and preserve D. semivestitus as good as possible. The reason to implement the campus policies because the 54% (N = 27) respondent agreed that it would be for biodiversity preservation. These results show that respondent integration with campus planning can guarantee that planning and development on campuses take preservation concerns into account. This assists when making decisions about development, landscaping, or infrastructure that could have unexpected negative impacts on D. semivestitus. Thus, these are evidence that D. semivestitus need to be carefully taken care and the students need to give more appreciation towards this endangered species. Moreover, establishing official guidelines may give D. semivestitus legal protections. This may include creating boundaries for protected areas, prohibiting activities, and enforcing penalties for violations. Legislative frameworks aid in enforcing preservation measures and preventing behaviour that would endanger the species.

Discussion	Agreement	No. of respondent (N=50)	Relative Frequency (%)
Implementation of campus policies to prioritize <i>D.</i> <i>semivestitus</i>	Yes No Not sure	46 1 3	92 2 6
Reason to implement the campus policies	Biodiversity Preservation Educational Value Enhancing Campus Aesthetics Community Engagement Scientific Research Opportunities	27 19 19 23 22	54 38 38 46 44

Table 7. Implementation of campus policies of D. semivestitus

(Source: Authors, 2023)

### **Students Contribution to Preservation Approach**

Table 8 shows that 64% (N = 32) respondents agreed that student's participation in planting initiatives and 46% (N = 23) in volunteering in awareness campaign can make a greater chance to preserve the critically endangered species of D. semivestitus. These results shows that students can take part in practical preservation initiatives. This could include carrying out sustainable activities, keeping an eye on patterns of population growth, and preserving habitat. Their individual involvement may have an obvious impact on D. semivestitus preservation. Students' involvement can help in the development of new and effective approaches for the preservation of D. semivestitus. Students can provide with innovative ideas, creative solutions, and fresh perspectives that enhance the preservation efforts.

Discussion	Agreement	No. of respondent (N=50)	Relative Frequency (%)
Contribution to preserve <i>D. semivestitus</i> in campus	Participating in planting initiatives Volunteering in awareness campaign Joining preservation clubs or organizations Incorporating preservation topics into coursework	32 23 21 20	64 46 42 40

Table 8. Student contribution to preservation approach of D. semivestitus

(Source: Authors, 2023)

#### **Preferred Communication Channels**

Table 9 shows that 36% (N = 18) respondent agreed that both of campus events and academic courses can potentially be the preferred communication channel for any kind of update D. semivestitus information such as environmental preservation update and more news or bulletin about this critically endangered species as students can find out about this species in much more details and comprehensive. Furthermore, campus programmes and events on campus attract a wide range of people, including all staff, faculty, students, and occasionally even members of the wider community. This broad audience ensures that information regarding D. semivestitus is seen by a wide range of people.

Discussion	Agreement	No. of respondent (N=50)	Relative Frequency (%)
Communication channel for <i>D.</i> <i>semivestitus</i> information	Campus events Academic courses Social media	18 18 14	36 36 28

Table 9. General knowledge of D. semivestitus before taking survey

(Source: Authors, 2023)

## CONCLUSIONS

This research paper was based on the idea of fostering awareness of D. semivestitus in Seri Iskandar campus. From the result that was obtained, researchers can conclude that most respondent that consist of students are oblivious about the existence of D. semivestitus and how this species is critically endangered but there seem that only small group of people are conscious about the urgency on how important this species need to be taken care of. Looking back on the journey, researchers can see that this research has sparked a wider awareness of the environment in addition to improving the students' comprehension of D. semivestitus. In conclusion, the strive to raise awareness of D. semivestitus within our campus students has proven to be a crucial step toward nurturing understanding of this species. Through various initiatives such as tree planting initiatives, volunteering in awareness campaign and community engagement, we will witness a significant shift in understanding and appreciation for this invaluable species.

## ACKNOWLEDGEMENT

Researchers would like to express sincere gratitude to all who contributed to the completion of this research paper. All your support, guidance, and collaboration have been invaluable. This endeavour would not have been possible without your dedication and expertise.

## REFERENCES

- Ashton, M., Gunatilleke, C., Gunatilleke, I., Griscom, H., Ashton, P., & Singhakumara, B. (2011). The effect of shade on leaf structure and physiology of tree seedlings from a mixed dipterocarp forest. *Botanical Journal of the Linnean Society*, *167*(3), 332-343. https://doi.org/10.1111/ j.1095-8339.2011.01181.x.
- Bubel, K., Reczyńska, K., Pech, P., & Świerkosz, K. (2021). Secondary Serpentine Forests of Poland as a Refuge for Vascular Flora. Diversity. https://doi.org/10.3390/d13050201.
- Cayton, H., Haddad, N., Henry, E., Boor, G., Kiekebusch, E., Morris, & Aschehoug, E. (2023). Restoration success varies based on time since restoration in a disturbance-dependent ephemeral wetland ecosystem. *Restoration Ecology*, 31(5). https://doi.org/10.1111/rec.13883
- Conservation of endangered species: In the case of Shorea macrantha. (2012). IEEE Conference Publication IEEE Xplore. https://ieeexplore. ieee.org/abstract/document/6422859.
- Conservation of the critically endangered tree species Dipterocarpus semivestitus in Malaysia. (2013). *IEEE Conference Publication* | *IEEE Xplore*. https://ieeexplore.ieee.org/document/6560121.
- Domestication And Conservation of Endangered Medicinal Flora at Two Agro- Ecological Zones of Pakistan (n.d.). *Pakistan Journal of Weed Science Research* (Weed Science Society of Pakistan: WSSP). https:// www.wssp.org.pk/weed/ojs/index.php/pjwsr/article/view/1041.
- Hamzah, N. H. M. H. L. D. H. (2023). *Revisiting the Endangered Keruing Padi: A Call to Action.* UiTM News Hub. https://news.uitm.edu.my/

revisiting-the- endangered-keruing-padi-a-call-to-action/.

- IUCN Red List of Threatened Species: Dipterocarpus semivestitus. (2022). *IUCN Red List of Threatened Species*. https://www.iucnredlist.org/ species/33377/215143360.
- Kiew, R., & Chung-Lu, L. (2020). Checklist of vascular plants of Klang Gates Quartz Ridge, Malaysia, a 14-km long quartz dyke. PhytoKeys. https://doi.org/10.3897/phytokeys.166.55778.
- Kim, S. J., Park, H. J., Lee, C. W., Kim, N. Y., Hwang, J. W., Lee, B. D., Park, H. B., An, J., & Baek, J. (2022). Endangered plant species under differing anthropogenic interventions: how to preserve Pterygopleurum neurophyllum in Wondong wetland PeerJ. https://doi.org/10.7717/ peerj.14050.
- Liliwirianis, N., Suratman, M., & Tahir, S. (2013). Conservation of the critically endangered tree species dipterocarpus semivestitus in Malaysia. https://doi.org/10.1109/beiac.2013.6560121.
- Lortie, C., Filazzola, A., Kelsey, R., Hart, A., & Butterfield, H. (2018). Better late than never: a synthesis of strategic land retirement and restoration in California. *Ecosphere*, 9(8). https://doi.org/10.1002/ecs2.2367.
- Maier, N., Chamorro, A., Kraft, P., & Houska, T. (2018). Multi-source uncertainty analysis in simulating floodplain inundation under climate change. *Water*, 10(6), 809. https://doi.org/10.3390/w10060809.
- Qi, S., Luo, W., Chen, K., Li, X., Luo, H., Yang, Z., & Yin, D. (2022). The prediction of the potentially suitable distribution area of Cinnamomum mairei h. lév in China based on the maxent model. *Sustainability*, 14(13), 7682. https://doi.org/10.3390/su14137682.
- Zhao, Y., & Gong, X. (2015). Diversity and conservation of plant species in dry valleys, southwest China. Biodiversity and Conservation. https:// doi.org/10.1007/s10531-015-0952-2

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Tuan,

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Sekian, terima kasih.

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Saya yang menjalankan amanah,

Setuju.

PROF. MADYA DR. NUR HISHAM IBRAHIM REKTOR UNIVERSITI TEKNOLOGI MARA CAWANGAN PERAK KAMPUS SERI ISKANDAR

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