

# CHAPTER I

## INTRODUCTION

### 1.1 Background

Indonesia is a country with an extensive diversity of flora spread throughout the archipelago (UNEP & CBD, 2021). One of the distinctive plants that holds an important position in mountain ecosystems is the Javanese Edelweiss, *Anaphalis javanica*, also known by local communities as the “Senduro Flower” (Susanto et al., 2024). Edelweiss has become an icon of mountain beauty as well as a part of the ecological balance of highland areas (Alifah et al., 2024). However, its existence is increasingly threatened by human activities, particularly illegal picking, tourism pressure, and climate change that disrupts its growth patterns (Rahma et al., 2022). This situation indicates the need for conservation efforts that are not only ecological but also educational, so that the public can understand the importance of the Javanese Edelweiss as one of Indonesia’s endangered endemic flora species.

Based on an interview conducted by the author with the head manager of the Edelweiss Park in Wonokitri Village, Pasuruan, East Java, public awareness regarding the preservation of Edelweiss flowers, especially the Javanese Edelweiss (*Anaphalis javanica*), is still relatively low. This can be seen from the ongoing illegal harvesting activities in the Bromo Tengger Semeru National Park area, where the flowers are mostly exploited as economic commodities. From the interviews conducted, all informants stated that the nickname “eternal flower” attached to Edelweiss has triggered irresponsible actions from tourists who pick the flowers, considering them as souvenirs and romantic gifts for their partners without considering the potential damage caused to the Edelweiss itself.

To understand this urgency more deeply, it is important to review the ecological context of the Javanese Edelweiss. Ecologically, the Javanese Edelweiss grows in mountainous zones such as Bromo Tengger Semeru National Park and Mount Lawu. Research by Hernawan et al. (2021) shows the close relationship between Edelweiss and its surrounding ecosystem, including its role in pollination processes through interactions with insects. Based on the author’s interview with the head manager of the Edelweiss Park in Wonokitri Village, Edelweiss flowers generally have varying life cycles, but it is certain that their life cycle requires a long period of time. Specifically, the Javanese Edelweiss (*Anaphalis javanica*) requires up to two years to grow and develop perfectly before producing flowers and seeds for reproduction.

In addition, interviews with him also revealed that Edelweiss flowers have low competitiveness in their natural habitat. These flowers cannot grow properly when attacked by pests such as caterpillars and diseases such as fungi, while invasive plants or weeds also inhibit their growth. Furthermore, according to Mrs. Ika Lia Novenda, S.Pd., M.Pd., a biology education lecturer serving as an expert informant, this flower cannot grow well unless it is in an open area. This information was also confirmed in an interview with Mr. Teguh Wibowo. On the other hand, human activities such as the illegal drying and selling of Edelweiss are

still frequently occurring (Tin Naing Oo et al., 2022). Legally, Edelweiss has been designated as a protected flora species under P.106/MENLHK/SETJEN/KUM.1/12/2018 (KLHK, 2020), which was also mentioned in the interview with the head manager of the Edelweiss Park in Wonokitri Village. He explained that Regulation of the Minister of Environment and Forestry No. 20 of 2018 specifically mentions one species, namely the Javanese Edelweiss (*Anaphalis javanica*), as a specially protected species both within conservation areas and outside conservation areas such as the Edelweiss Park in Wonokitri Village. Nevertheless, violations still continue to occur. As emphasized by Mr. Teguh Wibowo, the head manager of the Edelweiss Park in Wonokitri Village, during the interview with the author, the core issue is that public awareness regarding the preservation of Edelweiss flowers in general is still lacking.



Picture 1.1 Javanese Edelweiss flower (*Anaphalis javanica*), 2025  
(Source: Documentation by Lia Novenda, S.Pd., M.Pd.)

In addition to ecological pressures, there is also the phenomenon of tourism activities that do not preserve the sustainability of the Edelweiss habitat. In several tourist areas, unsustainable activities such as the use of trail motorcycles also contribute to damaging Edelweiss habitats (Tyas & Najicha, 2023). Furthermore, the flower's appeal as a symbol of eternal love, its distinctive aroma, and its durability after being picked have made it a popular souvenir (Soendoess et al., 2022). This is in line with information obtained by the author from interviews with Mrs. Ika Lia Novenda, S.Pd., M.Pd., a biology education lecturer serving as an expert informant, and Mr. Teguh Wibowo, the head manager of the Edelweiss Park in Wonokitri Village. In their respective interviews, both stated that Edelweiss generally has a distinctive scent, although it is not necessarily fragrant. According to Mr. Teguh Wibowo, Edelweiss flowers also possess strong durability, so even after being picked, the flowers remain visually attractive. These factors are what led Edelweiss to gain the nickname "eternal flower" and caused people in general to perceive Edelweiss as a symbol of eternal love. Research by Fahmi et al. (2025) emphasizes that although legal protection already exists, its effectiveness highly depends on public awareness in supporting the conservation of the

Javanese Edelweiss. This is also supported by statements made by Mr. Teguh Wibowo during the interview.

Furthermore, findings from literature studies and interviews conducted by the author indicate that flower-picking behavior occurs due to a combination of factors, including a lack of socialization, limited ecological awareness, aesthetic motivations, and cultural perceptions of Edelweiss as a symbol of eternal love. A study conducted on Mount Lompobattang showed that many hikers were unaware that Edelweiss is a protected species and were also unaware of the legal consequences related to damaging it (Fahmi et al., 2022). An interview conducted by the author with Sultana Rizaldi, an active hiker involved in a university nature-lover community, also revealed that myths and the culture of giving Edelweiss flowers to partners further reinforce flower-picking behavior. In the field, conservation education provided by hiking trail managers is still considered ineffective because it is often ignored by hikers. Law enforcement is also perceived as not creating a deterrent effect, resulting in repeated violations (Fahmi et al., 2022). An interview with Mr. Teguh Wibowo revealed that, in general, individuals who pick or damage Javanese Edelweiss flowers in the Wonokitri Village area around the Edelweiss Park are usually only given warnings and reprimands, and none have ever actually been brought into the legal process for such actions.

Based on the results of a questionnaire distributed to 117 respondents, most respondents were already familiar with the Javanese Edelweiss and aware of its protected status, primarily through social media. However, there is still a gap between knowledge and action. Nearly half of the respondents were aware of the threat posed by flower-picking activities, yet not all fully understood the ecological impacts in depth. Although the majority stated that they were willing to reprimand individuals who pick Edelweiss flowers, conservation education still needs to be strengthened so that this knowledge can be translated into real behavior. In interviews, Mr. Teguh Wibowo also emphasized that the existence of the Edelweiss Park in Wonokitri Village functions not only to support conservation and preservation efforts for Edelweiss flowers, but also as an educational platform to help the public and tourists gain a deeper understanding of Edelweiss, including its reproductive process until flowering. This educational effort aims to increase awareness that Edelweiss flowers, especially the *Anaphalis javanica* species, require a long period of time and face considerable difficulty before reaching the flowering stage. Therefore, in the future, when encountering these flowers in nature, visitors and the general public will be less likely to pick or damage them carelessly.

In this context, educational illustration books are viewed as a potential medium for increasing awareness regarding the conservation of the Javanese Edelweiss. Illustration books can convey information in a visual and narrative manner that is easier to understand and more memorable for readers (Sutanto, 2023; Kusrianto, 2011; Supriyono, 2010). During an interview with Mr. Teguh Wibowo, he also stated that educational efforts carried out at the Edelweiss Park in Wonokitri Village are currently limited to tourism packages combined with educational sessions about Edelweiss flowers, as well as outreach programs regarding Edelweiss and conservation concepts for junior high school students in the Wonokitri area.

He further explained that educational materials about Edelweiss are generally still limited to formal media such as research journals, and that there is still no engaging and accessible educational media for the general public that introduces the Javanese Edelweiss while emphasizing the importance of preserving the flower in its natural habitat.

This educational illustration book medium is also highly relevant for hikers, both beginners and experienced climbers, as they are among the groups that directly interact with Edelweiss habitats (Dewantara, 2017). This aligns with the interview results with Mrs. Ika Lia Novenda, S.Pd., M.Pd., who stated that Edelweiss flowers are also easily found along hiking trails in the Ijen Mountains, Banyuwangi, which consist mainly of sloping hiking routes. Moreover, she explained that Edelweiss flowers can generally already be found at elevations of around 1,800 meters above sea level. This proves that the natural habitat of Edelweiss is relatively accessible to hikers, making it important to educate hiking communities about increasing awareness regarding the preservation of Edelweiss, especially the *Anaphalis javanica* species. Through an attractive visual approach, the illustration book is expected to strengthen hikers' knowledge, attitudes, and conservation behavior.

Moreover, several previous studies discussing Edelweiss flowers have already examined the conservation of the Javanese Edelweiss, including preservation strategies for *Anaphalis* spp. through various approaches such as habitat management, community collaboration, and ecological education (Ade et al., 2021; Andyarto & Roziaty, 2022; Jawwad et al., 2024). However, there has been no study specifically developing a visual educational medium in the form of an illustration book focused on the conservation education of the Javanese Edelweiss and specifically targeted toward mountain hikers as a group directly interacting with Edelweiss habitats. In addition, most previous studies have focused more on Edelweiss from ecological conservation and policy perspectives rather than a visual design-based approach that could bridge the gap between public knowledge and actual behavior in the field. This research gap is what motivated the author to design an educational illustration book about the Javanese Edelweiss (Senduro Flower) as a communicative, attractive, and accessible conservation medium.

Therefore, the author hopes that this research and design project can provide a meaningful contribution in strengthening conservation education for the Javanese Edelweiss and increasing public awareness, particularly among hikers, through a visual approach that not only conveys information but also fosters empathy and ecological responsibility within society, especially among mountain climbers. This is particularly important considering the facts obtained from in-depth interviews with experts as well as literature studies conducted by the author, which indicate that Edelweiss flowers generally face difficulties reproducing naturally in their original habitat and require a very long time to bloom perfectly, specifically up to two years.

## **1.2 Problem Identification**

1. According to the results of interviews with experts and literature studies, the population of the Javanese Edelweiss in its natural habitat is declining due to various factors, one

of which is human activity such as mountain climbing, illegal picking, and tourism pressure, causing this flora species to become increasingly endangered.

2. There is currently no visual media in the form of an educational illustration book that specifically raises the theme of the Javanese Edelweiss using an informative and aesthetic visual design approach, along with visual and narrative elements capable of attracting readers' interest in fostering awareness for the preservation of Indonesia's endemic flora.
3. There is also a lack of engaging educational media regarding the conservation of the Javanese Edelweiss. Existing informational media tend to be textual, scientific, and less visually communicative.

### **1.3 Problem Formulation**

Based on the background above, the problem formulation in this research is: how to design an educational illustration book that is effective in increasing readers' awareness regarding the preservation of the Javanese Edelweiss in its natural habitat, and what illustration style and visual narrative elements should be included in order to attract readers' attention within the context of educational media about plant conservation?

### **1.4 Scope and Limitations**

1. The main object of this research is limited to the Javanese Edelweiss flora (*Anaphalis javanica*), focusing on its ecological, morphological, and cultural values related to conservation efforts.
2. The scope of the designed media is focused on an educational illustration book (a light encyclopedia-style book) as a medium for delivering information and education regarding the conservation of the Javanese Edelweiss, without covering other forms of media such as videos, animations, or interactive exhibitions.
3. The primary target audience for this educational illustration book design is late teenagers to adults (approximately 15–30 years old), particularly individuals who have an interest or involvement in outdoor and hiking activities. The selection of this target audience is based on their close connection to the context of the discussed object, both in terms of activities, understanding of regulations, and their role in preserving the Javanese Edelweiss in its natural habitat.
4. The informational content within the illustration book includes species introduction, habitat, conservation threats, ecological values, as well as moral messages regarding the importance of preserving the Javanese Edelweiss. Scientific material is presented using simple language and communicative visuals to make it easier to understand.
5. The research area and visual references are focused on the Wonokitri tourism village area, specifically the Edelweiss Park and Bromo Tengger Semeru National Park, without discussing Edelweiss species from other regions.

6. The design approach is limited to aspects of educational illustration without exploring experimental techniques beyond the context of visual education.

### **1.5 Design Objectives**

The objective of this research is to increase public awareness, particularly among individuals who have an interest or involvement in outdoor and hiking activities, regarding the preservation of the Javanese Edelweiss in its natural habitat so that its population in the wild can be maintained. This objective is pursued through the design of an effective educational illustration book that specifically raises the theme of the Javanese Edelweiss (*Anaphalis javanica*) by identifying visual and narrative elements capable of attracting readers' interest in order to support the preservation of the Javanese Edelweiss flower. This is considered important because previous informational media have generally been textual, scientific, and less visually communicative.

### **1.6 Research Benefits**

This research is expected to provide the following benefits:

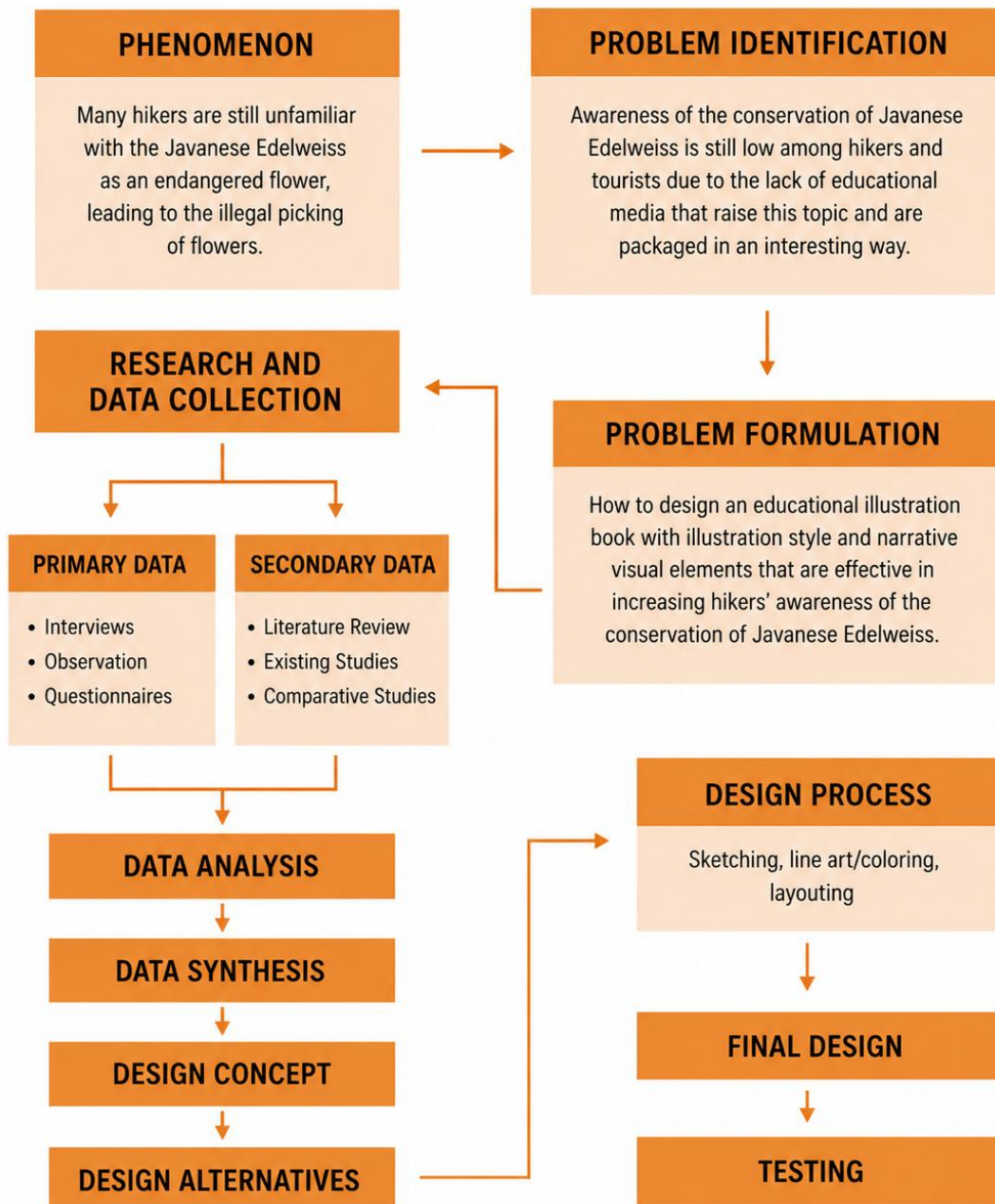
#### **a. Theoretical Benefits**

1. The development of media studies regarding illustration-based educational design, particularly related to visual narrative techniques and the presentation of scientific information for conservation purposes.
2. A contribution to visual communication design theory, namely that the principles of visual communication design (composition, typography, color palette, layout, and illustration style) can be effectively utilized to increase understanding and empathy toward the preservation of endangered flora species.
3. This research demonstrates how environmental education can be integrated with a design process that adapts to the needs and characteristics of the target audience (teenagers to adults), thereby serving as a reference for future studies.

#### **b. Practical Benefits**

1. A ready-to-use educational medium for hikers. The designed illustration book can be directly utilized as educational material for nature-lover communities or field education activities to improve knowledge regarding the Javanese Edelweiss.
2. Through illustrations and easily understandable messages, this illustration book is expected to encourage conservation behavior among visitors, such as avoiding flower-picking practices, reporting locations, or participating in conservation programs.

## 1.7 Design Framework



picture 1.7 Design Framework  
(Source: Personal Documentation)