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# WEEDS AS A SOURCE OF DEVELOPMENT IDEA ON BATIK MOTIVE

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**Abstract:** Batik is a cultural heritage textile that becomes creative economy based on local advantage in Indonesia. The purpose of this study is to develop batik motives by using weeds as a source of ideas derived from the ecological wealth of Indonesia. The development of weed motive is done in the form of repeated and free pattern. Data were analyzed descriptively. The results showed that weeds can be used as a source of ideas for batik motives. The diversity of weed species makes the choice of a very rich motive. Weeds can be the main ornament or companion (isen-isen). The results of this study broke the World Record of the Indonesian Record Museum (MURI) as "The Proponent of Making Batik with the Staining of the Most Common Weeds" on March 1, 2016, through mordant-assisted weed extracts.

**Key words:** batik, weed, motive, local wisdom

## 1 INTRODUCTION

Batik is original and traditional textile in Indonesia. In the research, batik is an ideas and philosophy of motive depart from conservation values, such as the preservation of natural resources and the preservation of local art and culture, the context with local potential and the traditional values of society. Conservation batik motifs can be derived from what is contained in nature, such as trees, plants, flowers, fruits or animals, including the art of carving, dance and traditional ornaments. In addition, the coloring and process of Batik Conservation must be environmentally friendly, using materials with recycled concept, low cost and no cost material.

Batik is a local name for textile products supplied in Indonesia for the technique of applying dyed-to-cloth patterns, using canting tools [1]. Batik is a craft that has high artistic value and has been a part of Indonesian culture (especially Java) since a long time. Batik is a traditional textile product of Indonesia that has been inherited between the begerasi. "Batik" is a word derived from the Javanese language. Batik comes from the word "amba" which means drawing and "tick" which means small (Suwarto, 1998: 8). Batik can also be interpreted as a craft art that refers to how to decorate the fabric with a wax cover to form its ornament, forming a dyeing field by dyed with a dye can [2].

The protection of batik can be done with continuous efforts to develop and maintain batik existence through scientific studies and innovation [3]. Research related to the development effort of batik industry sector, can be said as an effort to raise

the image of arts and culture based on local wisdom [4]. As one of the creative industries, the development of creative motives is needed. But the creativity of the batik industry in developing the motive is still very low (National Strategic Issues). Many craftsmen only imitate the motives that sell in the market [5]. This research focuses on developing creative ideas of motive development with the demands of society today.

Weeds are found all over Indonesia. This plant is defined as wild plants or weeds, plants that interfere with cultivated crops or plants that are not obviously beneficial. Hundreds and even thousands of weeds have not been explored well. This research develops weeds as a source of ideas for the manufacture and development of batik motives, with the aim of:

1. identifying the characteristics of weeds to be explored into batik motives;
2. develop the design of batik motive with the source of the idea of weed, in the form of repeated pattern and free pattern, in accordance with the principles of design and the concept of making batik motive manually.

The benefits of this research in general are to add the treasures of the source of ideas for unique and creative batik motives, also can be applied in the batik industry. In addition, this research is useful for:

1. implement safeguarding efforts on batik as a cultural heritage, especially the traditional values held;
2. to increase the reproduction of batik motives and environmentally-based batik products on an ongoing basis;

- encouraging the creation of ideas and innovative motives for the batik industry, as an industry driving tourism and creative economy.

## 2 METHODOLOGY

This research is a research oriented to the development and creation of works, therefore the approach used for this is the artistic approach of "Art Practice Based Research". This is related to the general purpose of research that is to produce batik design based on local resources as a source of ideas [6]. The research was conducted in batik/textile laboratory of Textile Department in Universitas Negeri Semarang. The exploration of weed species is conducted in the fertile medini tea plantation areas. The object of this research in the stage of basic research and development is batik with weeds as a source of ideas. The research focuses on the exploration of batik motives of suket as the richness of Indonesian motives based on local natural-physical resources. The steps of development batik motive are:

- Literature study and direct observation about weeds;
- Preparation of batik motive design with the source of weed idea manually or with computer aid;
- Validation of motives to art experts and batik experts;
- Applying the design of motives on batik cloth;
- Assessing the quality of weed batik motive.

Early data collection on weed species and characteristics was done through literature study, direct field observation. For validation of ready-made motives and assessment of the results of application of motives on the fabric to experts used questionnaires. Data were analysed using qualitative descriptive analysis technique.

## 3 RESULTS AND DISCUSSION

### 3.1 Batik and batik motive characteristics

Batik has been known throughout the world as a traditional Indonesian cloth. Batik is Javanese process of resist printing, where molten wax is poured over patterns before dyeing which leaves the waxed portion unaffected in dyeing [7]. Batik is also the indigenous wax resist dye process of Indonesia gradually yielded rich, sophisticated fabrics [8]. It is also said "... today, batik has become a generic term referring to all categories of wax resist dyeing in the world". Thus, batik can be defined as a traditional Indonesian cloth with a distinctive motive, made with dyeing techniques, using the night as an obstacle. UNESCO asserts that batik's characteristics lie in "the use of night as an obstacle" and canting and copper stamp as a tool to attach the night on the surface

of the fabric [9]. The uniqueness of the next batik is the motive. Traditional batik motive consists of two components: (1) main ornaments and (2) filler ornaments (*isen-isen*). *Isen-isen* also found in two kinds, namely: (1) *isen-isen* ornament and (2) background. Batik motive consists of repetition of motive units in all directions, into a unity of motives [10]. These motive units are also called patterns. In accordance with the pattern classification, there are types of patterned motives:

- diagonal such as slopes, machetes, lyrical udan;
- diagonal boxes such as sido mukti, sido asih, sido nuh,
- irregular ferment, like ceplok, jlamprang;
- hoarse;
- buketan;
- tumpal, etc.

### 3.2 Weed as source of batik motive idea

Weeds that are always around the cultivated plants can inhibit growth and suppress the end result of agriculture, because it utilizes growing facilities (such as nutrients, water, light and growing space) similar to cultivated plants. As a result of the behavior of the weeds, humans control or eradicate weeds from the yard, gardens, parks, sidewalks with:

- mechanical means, such as pulled, burned;
- biological methods, used as animal feed or made natural fertilizer;
- chemically, using selective or no selective herbicides [11].

Weeds can be classified according to where they grow, their leaf shape, length of life and the level of malignancy. Based on the growth site, it is known:

- land weeds, such as grasses;
- aquatic weeds, such as water hyacinth (*Eichornia Crassipes*);
- weeds that live parasites ride on other plants, such as parasites [12].

### 3.3 Developing weed for batik motive

This research succeeded in developing 50 kinds of motives with the source of weed idea and applied it to batik motive, among others:



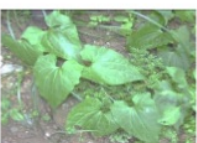

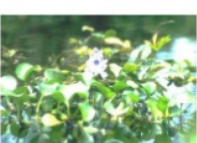


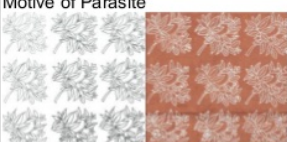
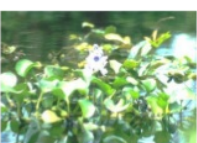



- Wudelan* (*Cyperus Kyllingia* Endl); (2) Broken Steering (*Emilia Sonchifolia* L.); (3) *Dadahan* (*Fagus Sylvatica*); (4) *Cacalincingan* (*Oxalis Corniculata* L.); (5) *Tumbaran* (*Fimbristyllis Littoralis* Gaudich); (6) *Kremah* (*Alternanthera Brasiliensis*); (7) Purple buttoned grass (*Borreria Laevis*); (8) *Pletekan* (*Ruellia Tuberosa* L.); (9) *Brambangan/Aur-aur* (*Commelina Diffusa* Burm); (10) *Kemangi* (*Spigelia Anthelmia*); (11) Putting Weed (*Clibadium Surinamense* L.); (12) *Grintingan* (*Cynodon Dactylon*); (13) *Godong Puser* (Synonym *H. Capitata* Jacq); (14) *Pulutan* (*Urena Lobata*); (15) Pait Grass (*Paspalum Conjugatum*); (16) *Getih-getihan* (*Rivina Humilis* L.); (17) *Limam* (*Elephantous Scaber*); (18) *Meniran* (*Phyllanthus Niruri*); (19) *Patikan Kebo* (*Euphorbia Hirta* L.); (20) Spinach Thorns (*Amaranthus Spinosa* L.); (21) *Genjoran* (*Digitaria Adscendens* (HBK)

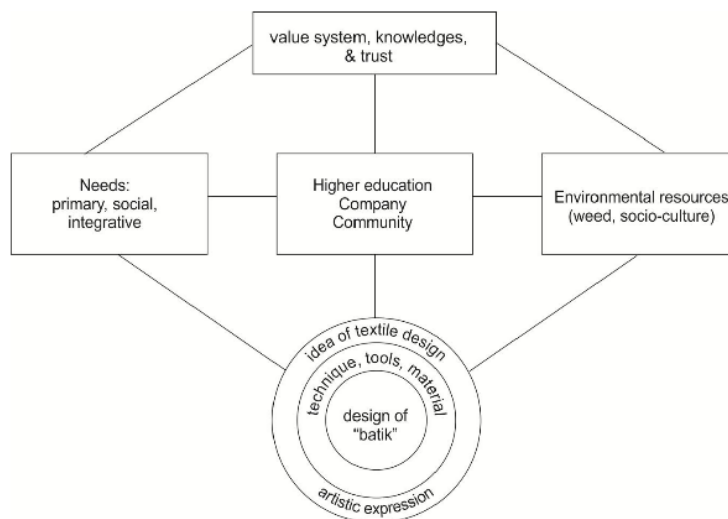
Henr); (22) Rendering (Cyperus Iria L.); (23) Water Boyfriend (Impatiens Balsamina L.); (24) Keris (Sceleria Sumatrensis Reyze); (25) Sintrong (Erechthites Valerianifolia); (26) Urang-aring (Elipta Alba L.); (27) Sidagori (Sida Rhombifolia L.); (28) Crocodile Wild (Portulaca Oleracea L.); (29) Patikan Emas (Euphorbia Prunifolia Jacq); (30) Jebungan (Cyperrus Diffornis L.); (31) Tuton, Black Face (Echinochloa Colonum); (32) Mamam (Cleome Rutidosperma); (33) Kirinyuh (Choromolaena Odorata L.); (34) Songgolangit (Tridax Procumbens); (35) Malela (Brachiaria Mutica); (36) Teki (Cyperus Rotundus L.); (37) Bengal (Paniciun); (38) Clover (Marsilea Crenata); (39) Tiwai (Eleutherine Palmifolia); (40) Sembung Rambat (Mikani Micranta); (42) Acoustical Plants (Acalypha Australis) (43) Rerumputan (Acalypha Indica L.); (44) Kokosan (Lansium Aqueum); (45) Jambé-jambeán (Setane Plicata (Lamk) T.Cooke); (46) Kumis Kucing (Utricularia); (47) Enceng Gondok (Eichornia Grassipes); (48) Rumput Air (Hydrilla Verticillata); (49) Tuan Putri (Cassya Eiliformis); (50) Benalu Mindi Tree (Melia Azedarach).

Not all types of weed plants were developed as inspiration for batik motives. Some of the following motives in Table 1 are developed based on the source of ideas and apply it to batik motives.

Batik as a cultural heritage in one way has the traditional values that are unique and at the same time become the identity of the community so not willing to be released. The implication is that traditional batik with motives and cultivation techniques that have been in existence need to be preserved from one generation to the next. On the other hand, the development of civilization of society with the modernity it carries is also important to be faced, accommodated, and faced as a condition of existence of batik in Indonesia. The implication, batik development efforts with the creativity and innovation is the necessity.

**Table1** Weed motive design with repeating patterns

No	Plats	Developing Motive	Description
1		Motive of Grass 	<ul style="list-style-type: none"> <li>Motives structure use rotation repeat technique, consists of <i>isen-isen</i> and main motives. Colour design uses white fabric for <i>isen-isen</i>, orange for main motive, and dark brown for background.</li> <li>This type of weed often lives in the low and medium land (<i>Axonopus compressus</i>). This grass is classified as wild and strong with roots that are also strong. The nature of these grass plants with a spacing of about 5-10 cm.</li> </ul>
2		Motive of Propagate Grass 	<ul style="list-style-type: none"> <li>Motive structure use full repeat technique, only in the form of main motive. There is no <i>isen-isen</i>. Colour design uses white for main motive, and brown for background.</li> <li>This type of weed called <i>Sembung Rambat</i> in Indonesia (<i>Mikania Micranta</i>) often lives on medium and high plains. This grass is classified as wild and strong with roots that are also strong. The nature of these grass plants spreads with a spacing of about 10-30 cm.</li> </ul>
3		Motive of Water weeds 	<ul style="list-style-type: none"> <li>Motives structure use full repeat technique, consists of main &amp; <i>isen-isen</i> motives. Colour design uses white for <i>isen-isen</i> and main motive, and brown for the background.</li> <li>This type of weed is called <i>Eceng Gondok</i> in Indonesia, with the Latin name <i>Eichornia Crassipes</i>. This type of weed often lives in the low and medium land, especially in marshes or fresh water. These weeds are classified as wild with a fairly strong stem.</li> </ul>
4		Motive of Parasite 	<ul style="list-style-type: none"> <li>Motives structure use full repeat technique, only in the form of main motives. There is no <i>isen-isen</i>. Colour design uses white for main motive, and brown for background.</li> <li>This type of weed is called the mango tree parasite (<i>Dendrophthoe Pentandra</i>) that often lives in the lowlands, medium and high. This parasite is classified as wild and strong.</li> </ul>
5		Motive of Water weeds 2 	<ul style="list-style-type: none"> <li>Motives structure use half full repeat technique, consists of main &amp; <i>isen-isen</i> motives. Colour design uses white for <i>isen-isen</i> and main motive, and purple for the background.</li> <li>Called <i>Eichornia Crassipes</i>. The development of this weed motive can be done by taking leaves and leaves as the main motive, and some form variations as a supporting motive. <i>Isen-isen</i> uses stylization of leaf bone</li> </ul>
6		Motive of Water Grass 	<ul style="list-style-type: none"> <li>Motives structure use random repeat technique consists of main &amp; <i>isen-isen</i> motives. Colour design uses white for <i>isen-isen</i> and main motive, and green for the background.</li> <li>The development of this motive comes from the sea with the scientific name <i>Hydrilla Verticillata</i>. The development of the weed motives of this plant can be done by using the basic as the main motive, and also as a motive for support.</li> </ul>



**Figure 1** Chart of batik in the context of socio-cultural and nature-physical environment

In the context of culture, batik development always cannot be separated from the value system, knowledge and belief that surround it [13]. In this context batik is in a paradoxical position. Batik as a cultural heritage in one way has the traditional values that are unique and at the same time becomes the identity of the community so not willing to be released. The implication is that traditional batik with motifs and cultivation techniques that have been in existence need to be preserved from one generation to the next. On the other hand, the development of civilization of society with the modernity it carries is also important to be faced, accommodated and faced as a condition of existence of batik in Indonesia. The implication, batik development efforts with the creativity and innovation is the necessity.

Thus, the development of batik motifs with the source of sugar ideas need to be done by not breaking away from the cultural framework.

In Figure 1 is presented a chart showing the framework of batik development with the source of the idea of weeds in the cultural context.

### 3.4 Results of expert assessment of batik

The assessment was carried out by 7 respondents consisting of an ecology-linguistics expert, a botanist and five batik artisans using structured interview techniques. This interview took five responses from cultural experts about weed names in a local perspective in Indonesia. Five responses were also taken from botanists about the habitat and characteristics of weed species as a source of ecological ideas for the creation of batik designs. The next five responses were taken from traditional batik artisans about the potential and strategy of applying weeds as a batik motif design.

The results of product assessment to batik and art experts show that weeds are very feasible to be a source of batik motive ideas. *Firstly*, since weeds have the original name of the area (oral tradition) such as paitan grass, cacalincingan, patikan kebo, parijoto, kung wungu, etc., so the name of batik can easily take the original name of the plant from the original language of the region. *Secondly*, people generally recognize some usage of weeds that have not been researched, but commonly used by the community for medicines, such as roots of tares are usually used for hot medicine, parijoto fruit for pregnant women to give birth to beautiful, handsome and healthy children, which uses certain weeds as symbols or symbols of fertility. *Third*, the placement of weeds as batik motives can be "ornaments" and can also be isen-isen. This causes the creations to be made to vary greatly in ornaments and *isen-isen*. *Fourth*, the repetition of the motive rapot can be done in parallel or in diagonal form, thus adding to the diversity of the motive.

Implementation of research results in the course of Textile Design with the approach of Project Based Learning held on December 6 to 7, 2016 in Kampung Budaya of Universitas Negeri Semarang, Indonesia. The exhibition was attended by Chairman of "Dekranasda" of Central Java Province. The exhibition features batik shawl products with "gulma" (weeds) as the source of ideas, with the theme "Luhuring Sampur Wasiat Agung ing Bawana Konservasi". Visitors of the exhibition responded through questionnaires as well as oral statements. In general, visitors feel batik products with the source of the idea of weeds are very rich, because weed species very much reach hundreds of species and will produce a variety of motives that will not be exhausted to be excavated.

#### 4 CONCLUSION

This research produces 6 kinds of motives derived from the source of the idea of weeds, which is can applied directly in the form of staining using the weed material itself as a natural dye. Weed diversity can be the source of ideas for making motives, which are: motive of grass, motive of propagate grass, motive of water weeds, motive of parasite, motive of water weeds 2 and motive of water grass. Making weed batik motives are done in four structures: rotation repeat technique, full repeat technique, half full repeat technique and random repeat technique.

Not all weeds can optimally make into design, because they are have different ecological characteristics, shape and aesthetic. The resulting color fastness is considered good, as evidenced by the lack of color at the time of *dilorod* (melted) using boiling water with the addition of a bit of alkaline ash. The conclusion that can be taken is that weeds are very potential to be a source of batik ideas. Further research needs to be done for each type of weed on the coloring.

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