Perceptions of Sacred Site (Petren) and Plant Diversity in Malang, East Java, Indonesia

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Abstract-- One of the historical evidences of human civilization is the existence of water sources. A water source from spring has been of the most prominent need of people in Malang, who currently use the Regional Water Utility Company (PDAM) service to fulfill their daily water supply. Since Malang people still sacred several springs, and traditional sites are still regarded sacred, they hold traditional ceremonial activities to respect their ancestors in the sacred places such as petren and punden. This research is aimed to reveal the public perception about petren (punden) as well as the meaning of its biodiversity. The research areas comprised Lowokwaru, Kedungkandang and Klojen districts, Malang city, East Java. The methods used in this research were survey, open-ended interviews, semi-structured and in-depth interviews, while the types of plants were identified in Universitas Brawijaya (UB)'s herbarium (HBUR). The results indicated that there are petren (punden) with water spring, where traditional rituals take place—such as Petren of Panggung and Tunggul Wulung, in which water apple, klampok (Syzygium densiflora), mape tree, guyam (Inocarpus fagiferus), banyan tree, ringin (Ficus benyamina), sugar palm, aren (Arenga pinnata), bay leaf, salam (Syzygium polyanthum), and bendo (Artocarpus elasticus) grow. Whilst, there are also Petrens without water springs—including Sentono petren of Cemorokandang village, Madyopuro petren and grave of Mbah Honggo in Kajoetangan heritage village—where Ficus (Moraceae), Areaceae, Myrtaceae and Rutaceae clans grow. There are also sacred trees such as the family Moraceae (5 species), Myrtaceae (2 types), Rutaceae (1 type), Fabaceae (1 type), and Areaceae (1 type). The existence of Punden and its relation to water spring, oxygen source, and traditional customs, is essential to preserve traditional knowledge; has a high conservation value; preserves cultural diversity in society; has religious and traditional values and beliefs; preserves species, genetic of local plants potentially supporting education and ecotourism. The traditional petren conservation model has preserved and sustainable conservation value. However, the success of the preservation of local wisdom of the petren sites are dependent on the efforts of the local community and the local government of Malang.

Index Term-- Malang, petren, sacred tree

INTRODUCTION

The city of Malang was founded by King Gajayana of the Kanjuruan Kingdom around the 8th century stated in the Dinoyo inscription based on candrasengkala (lunar calendar) that reads Nayana Vasurasa in 682 Saka or in 760 AD, and has a Hindu Temple named Badut Temple. In 1222 a new kingdom, Singhasari, emerged with the first king named Ken Arok who would bring down the Majapahit Kingdom at Trowulan, East Java in 1295. Malang city is located in the centre of Malang Regency, crossed by Brantas River, located in the valley of Mount Bromo-Semeru, Mount Arjuno and Mount Kawi. Malang City is located in Malang, East Java currently the second largest city after Surabaya, with mild temperature.

East Java, largely populated by Javanese, Madurese, Tengger, Samin, Osing ethnic groups respectively, and small population of Chinese descendants, is rich in diversity of traditional customs, cultures, languages, beliefs and rituals. Thus, there is a close relation between the diverse traditional rituals and beliefs and the existence of local biodiversity. According to [2]; [11], banyan tree, ringin (Ficus benyamina), Indian fig tree, lo (Ficus glomerata), collared fig, ipik-ipik (Ficus procer) are amongst those that have mystical forces of nature.

Fig tree (Ficus spp.) is an evergreen plant and has an important ecological function in the tropical rainforest environment, where the fruits are the food sources of certain birds, mammals and insects. Banyan trees with their supporting roots penetrating the ground and crawling; breathing roots, the leaves with water bag in them creates a well-off and cool atmosphere surrounding the tree. Ficus especially the Bodhi tree (Ficus religiosa), banyan tree (Ficus benyamina), collared fig (Ficus procer) affect the people’s culture in terms of spiritual beliefs and religions. Banyan, having tree habitus, can be hundreds of years old with a diameter of 4-6 meters, be it with lush breathing root or not, and has a unique and scary character. [2,3,4] reported the sacred plants have such quintessential characteristics as being large, tall, shady, and old. Due to its sacred value, Tengger people think it is important take a good care of the tree. Ecologically speaking, the tree is environmentally beneficial as it prevents soil erosion, landslides, and conserves springs [11].

METHODS

This research was conducted in the sacred sites (Petren) in Malang City in 2019 (Figure 1). The methods employed were survey, open-ended interviews, semi-structured and in-depth interviews [6,8]. Tree species diversity was characterized [1,7] and distributed in UB’s herbarium (HBUR).
RESULTS AND DISCUSSION

The petren sites, in relation to water sources and cultural customs, have important roles as the following: a) preserving traditional knowledge; b) having high ecological conservation value and being oxygen source; c) preserving cultural diversity; d) having local religious and spiritual belief values; e) preserving species, genetic of local plants; and f) supporting education and ecotourism. Punden (petren, danyang) is defined as a sacred area for the graves of people who are considered as the forerunners of the village community [11].

The Ficus clan, known as a fig tree, has a terrestrial, epiphytic life character; trees, shrubs or vines (liana) belong to the Moraceae family [5]. Some types of their types are related to the worshiping object, and spring water conservation, for example banyan tree, ringin (Ficus benyamina), Ficus religiosa originating from India, Indian fig tree, lo (Ficus glomerata), collared fig, ipik-ipik (Ficus procera). Commonly, collared fig and banyan trees grow side by side; thus, local people symbolize them as lanang and wadon, Javanese words for male and female respectively.

Local trees and spring water conservation

Petren of Panggung and Tunggul wulung in Blimbing district has a clear-water spring advantaged by the surrounding community in the past. The existence of the petren site to date is still used for the customary practices. Panggung water spring in the form of petren or punden is situated in the village of Panggung, Mojolangu, Lowokwaru district with an altitude of 504 mdpl., S. 07.89777 and E. 112.66917. Based on the Dinoyo inscription, in the village of Dinoyo there are temples and statues, traces of brick foundations, and at the Panggung water spring in one Dinoyo village complex there is a brick structure which are likely to be baths or water spring of the Kanjuruan kingdom. This spring used to be advantaged as drinking water, washing, bathing, but today it is merely for traditional ritual practices. Sumber Ening or Sumber Peres baths has a depth of about 1.5 to 2 meters, is rounded with an area of 1000 square meters (Figure 1A). Panggung and Tunggul wulung springs are recognized from the existence of various types of sacred plants including: banyan, ringin (Ficus benyamina), bendo (Artocarpus elasticus), collared fig (Ficus procera), water apple, klampok (Syzygium densiflora), bay leaf, salam (Syzygium polyanthum), mango (Mangifera indica), sugar palm, aren (Areca pinnata), and mape tree, gayam (Inocarpus fagiferus), as well as the types of Javanese catfish (Clarias batrachus).
Local trees and Ficus as a worshiping object

There are 2 petrens in Kedungkandang district: Sentono petren (Figure 1B), in Sekarpuro village where there are plants of water apple, banyan, and cut off species such as serut (*Streblus asper*), sugar palm, aren (*Arenga pinnata*), bendo (*Artocarpus elasticus*) and mock orange, kemuning (*Muraya paniculata*) species, whereas shaved species, serut (*Streblus asper*), aren (*Arenga pinnata*), bendo (*Artocarpus elasticus*) and mock lime, kemuning (*Muraya paniculata*), and Madyopuro petren consisting of collared fig (*Ficus procera*) and banyan (*Ficus benyamina*). According to Mr. Partono (61 years old) and Kariani (68 years old), serut trees (*Streblus asper*), banyan, ringin (*Ficus benyamina*), water apple, klampok (*Syzygium densiflora*), and collared fig, ipik-ipik (*Ficus procera*) are amongst the highly sacred. Mbah Honggo Kusumo’s grave petren in Kayutangan village is now one of tourist destinations of Kampoeng Heritage Kajoetangan featuring banyan tree, ringin (*Ficus benyamina*) and collared fig, ipik-ipik (*Ficus procera*) located in a mound that is believed to be sacred (Figure 3). He was the soldier of Pangeran Diponegoro (one of Indonesian heroic figures) who fled in 1925 then settled in Malang, whose grave in the petren is part of traditional rituals. Petren of Mbah Honggo is historically related to the grave area of Malang regents, Ki Ageng Gribik, in Kedung Kandang district. The Petren of Madyopuro and Mbah Honggo are excellent for their relatively abundant water source, clear and clean, with a depth of around 6-8 meters. Amongst the sacred plants in Malang are trees of the family Moraceae (5 species), Myrtaceae (2 species), Rutaceae (1 species), Fabaceae (1 species), and Arecaceae (1 species) (Table 1). The sacred traditional conservation model based on the knowledge system of the local community earns more respect thanks to their spiritual and religious values. Sacred sites like petren potentially contribute to biocultural conservation networks. They are such advantageous means of expressing and transmitting culture, which require written recognition. [9,10].

Fig. 1. Petren of Malang City. A. Punden of Panggung with its spring. B. Petren of Sentono (photo. J.Batoro)

Fig. 3. Punden, Grave of Mbah Honggo in Kayutangan village, Klojen district, Malang
Plants with their correct nomenclature were arranged by vernacular name, scientific name, family name, and location, district and habitus.

Table I
The different plants used in the four common area are tabulated below

<table>
<thead>
<tr>
<th>Local name</th>
<th>Scientific name</th>
<th>Family</th>
<th>Cemetery, Regency and habitus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aren</td>
<td>Arenga pinnata (Wurb.) Merr.</td>
<td>Areaceae</td>
<td>LW; KK; tree</td>
</tr>
<tr>
<td>Ringin</td>
<td>Ficus benyamina L.</td>
<td>Moraceae</td>
<td>LW; KK; KL; tree</td>
</tr>
<tr>
<td>Bendo</td>
<td>Artocarpus elasticus Reinw. ex Bl.</td>
<td>Moraceae</td>
<td>LW; KK; tree</td>
</tr>
<tr>
<td>Kemuning</td>
<td>Muraya paniculata (L.) Jack.</td>
<td>Rutaceae</td>
<td>KK; tree</td>
</tr>
<tr>
<td>Serut</td>
<td>Streblus asper Lour.</td>
<td>Moraceae</td>
<td>KK; tree</td>
</tr>
<tr>
<td>Jambu/ klampok watu</td>
<td>Syzygium densiflora</td>
<td>Myrtaceae</td>
<td>LW; KK; tree</td>
</tr>
<tr>
<td>Gayam</td>
<td>Inocarpus fagiferus (Parkinson) Fosb.</td>
<td>Fabaceae</td>
<td>LW; tree</td>
</tr>
<tr>
<td>Ipik-ipik</td>
<td>Ficus procera Auct. non Salisb.</td>
<td>Moraceae</td>
<td>KK; LW; KL; tree</td>
</tr>
<tr>
<td>Lo</td>
<td>Ficus glomerata Roxb.</td>
<td>Moraceae</td>
<td>KK; LW; tree</td>
</tr>
<tr>
<td>Salam</td>
<td>Syzygium polyanthum (Wight) Walp.</td>
<td>Myrtaceae</td>
<td>LW; tree</td>
</tr>
</tbody>
</table>


CONCLUSION
Sacred sites such as petren, punden, and those related to water springs and cultural traditions, have an important role in preserving traditional knowledge; have a high conservation value, oxygen source; preserve cultural diversity in society; have religious and traditional values; preserves species, genetic of local plants that have educational and ecotourism values. The existence of a large tree and water spring has mutual relation. The types of trees that are sacred include the family Moraceae (5 species), Myrtaceae (2 types), Rutaceae (1 type), Fabaceae (1 type), and Areaceae (1 type).

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REFERENCES