Iconic Meanings of Traditional Herbs and Shrubs: Culture-Specific Based Envirolinguistic Perspective

R. Kunjana Rahardi, Yuliana Setyaningsih, Rishe Purnama Dewi

Abstract. Traditional herbs and shrubs, which are ubiquitous all over the world, have been used in various cultures for many purposes, such as for medicinal and ornamental purposes. These herbs and shrubs have different names depending on the cultures where the plants grow. This envirolinguistic research which aims to conserve the names of the traditional herbs based on local culture in the perspective of linguistic and environment is a descriptive qualitative linguistic research. The tangible data of this envirolinguistic research is the list of names of the traditional herbs and plants obtained from many data resources. The location of the data sources is the places identified as the center of the agriculture of the traditional herbs in Yogyakarta Special Region and surrounding areas. Besides, in this digital era, the names of the traditional herbs can be obtained from the Internet websites. These two locational resources make the research adequately feasible to be analyzed. The linguistic data, which is the end-product of this research, are gathered or obtained by the use of observation method. The technique used to gather data also includes transcribing or recording techniques. Data can also be obtained by giving cues during the interview. This technique is sometimes accompanied by recording or transcribing, both directly and indirectly, open or secretly. The data analysis in the envirolinguistic research on the names of traditional herbs is conducted by applying the equivalent method and distributional method as commonly practiced in the linguistic research. The iconic meanings of herbs and shrubs resulted from the analysis were then presented.

Keywords: iconic meanings, traditional herbs and shrubs, envirolinguistic perspective

I. INTRODUCTION

Traditional herbs and shrubs, which are ubiquitous all over the world, have been used in various cultures for many purposes, such as for medicinal and ornamental purposes [1]. These herbs and shrubs have different names depending on the cultures where the plants grow [2], [3]. Each name in each different culture bears significance. In Indonesia, plants are named based on their resembles to familiar objects, such as animal names. This similarity between the names and the elements of the plant is called iconicity [4]. Some plants’ names are iconic, in which the names resembles one of the characteristics of the plants [1].

This digital documentation is meant to describe the iconic meanings contained in the name of some medicinal herb plants. The documentation is equipped with animation to illustrate the iconic meanings in each of the plants. The classification of the iconic elements is determined by a number of factors, such as the shape, color, and function, as can be seen in the description of the digital documentation.

II. LITERATURE REVIEW

The underlying theory of the envirolinguistic study is ecology and linguistics, especially semantics. The concept of ecology is a relatively new concept introduced and developed in Europe and America at the turn of ninth century. This concept does not only place humans as the object of the study but also the environment where they live [5]. Thohir asserts that ecology study all types of living beings, including human beings, language and culture in relation to their environment. Environment is anything that exists around human beings. Louis and Calvet define ecology as a science which deals with the relationship between an organism and its environment [3].

Linguistic ecology, referred to as envirolinguistics in this research, is defined by Louis and Calvet as a science which relates language and its environment [6]. They further argue that envirolinguistics contains the concept of interaction, either intrarelation, interrelation, or extrarelation between language, environment, and the combination of the interrelated components [6]. Besides the correlation between the language and its environment, Louis and Calvet also state that there is a concept of interdependence, which implies that language depends on its environment on the one hand. On the other hand, environment also depends on language. As a matter of fact, there is an interdependent relation between language and its environment, one being inseparable from the other [7].

Sapir’s and Whorf’s hypothesis on ‘language relativity’ in the linguistic study elucidates the relationship between language and culture, including, of course, the so-called environment, both in its weak version and strong version [8], [3]. Two of the keywords to keep in mind are the words ‘influence’ and ‘determine’. On the one hand, language influences its environment. On the other hand, language also determines its environment.
For instance, the vocabulary “rice” can have many words such as ‘butir padi’ (grain of husked rice), ‘butir beras’ (grain of unhusked rice), ‘tanaman padi’ (paddy), ‘menir’ (tenderly ground rice), while for European and American culture, they only have one word, rice [3].

This fact exemplifies the close relation between language and its environment. Before the Sapir and Whorf’s hypothesis, linguistics has known the concept of signified and signifier. Ferdinand de Saussure, the father of linguistics, mentioned that a linguistic entity always contains two impressions, namely the physical impression (signifier) and the meaning/concept (signified) [9]. The existence of linguistic meaning is caused by the existence of a linguistic sign. Furthermore, de Saussure suggests that the two aspects of sign, signified and signifier, have referential meaning. Referential meaning only exists in reality, and in terms of this research, referential meaning is closely related to environment.

In the study of envirolinguistics, which relates (intrarelation, interrelation, extrarelation) between language and environment to conserve and preserve the names of traditional herbs based on local culture, the theoretical framework to be used as the foundation of this research is that the traditional herbs are what Saussure calls the signifier [10]. So, the real entity is the shape or physical properties. The concept of meaning is the names used (signified) to refer to the traditional herbs. In other words, the linguistic concept is the name or referent of each traditional herb. There is interconnectedness (intrarelation, interrelation, and extrarelation) between the physical properties and linguistic meaning in the context of herbs and traditional medicines [11], [12]. There is even interdependence between them.

However, occasionally the physical properties and the meaning of the traditional herbs are not related. In this case, the relationship between the signs can be arbitrary or non-arbitrary. The non-arbitrary meaning will be referred to as iconic, whose layers of meaning need to be broken down in details [13]. These concepts will be elaborated in this envirolinguistic research on traditional herbs and plants. In accordance to the research formulation, the objectives of the envirolinguistic research on the names of traditional herbs are: (1) to describe the aspects of envirolinguistic forms found in the traditional herbs; (2) to describe the aspects of envirolinguistic meaning found in the traditional herbs; (3) to describe the relationship between the envirolinguistic forms and meanings found in the traditional herbs. The linguistic research conducted from the perspective of language and environment is not yet explored widely.

The research will bring benefits such as: (1) to conserve the names of the traditional herbs by providing linguistic documentation which will be useful in the future; (2) to increase and widen the scope of the multidisciplinary linguistic study to relate the language and its environment; (3) to develop the linguistic science, especially the meaning dimension, in relation to the environment.

III. RESEARCH METHODOLOGY

This envirolinguistic research which aims to conserve the names of the traditional herbs based on local culture in the perspective of linguist and environment is a descriptive qualitative linguistic research [14]. It means that there will be no quantification methods such as statistics because the main objective of this linguistic study from environmental perspective is not to present such quantitative instrumentation [15].

The tangible data of this envirolinguistic research is the list of names of the traditional herbs and plants obtained from many data resources. The location of the data sources is the places identified as the center of the agriculture of the traditional herbs in Yogyakarta Special Region and surrounding areas. Besides, in this digital era, the names of the traditional herbs can be obtained from the Internet websites [3]. These two locational resources make the research adequately feasible to be analyzed.

The linguistic data, which is the end-product of this research, are gathered or obtained by the use of observation method. The technique used to gather data also includes transcribing or recording techniques. Data can also be obtained by giving cues during the interview. This technique is sometimes accompanied by recording or transcribing, both directly and indirectly, open or secretly [16], [15]. The data analysis in the envirolinguistic research on the names of traditional herbs is conducted by applying the equivalent method and distributional method as commonly practiced in the linguistic research [17]. After the data is interpreted in the data analysis stage, the outcome is presented informally. It means that the data are formulated in the common words, not using specific symbols because this research does not require the presentation of such formal symbol.

IV. RESEARCH FINDINGS AND DISCUSSION

The discussion of the iconic plants will be classified according to their shape will be shown below.

A. Anting-Anting or Earrings (Acalypha Australis Linn)

The aspect being iconized in the earring plant is the shape of the leaf. The shape of the leaf of this plant resembles an earring usually worn by women as accessories. The leaves are alternate, oblong to lanceolate, obtuse in shape, and have toothed edges. In a certain culture, this plant is prized for a variety of medicinal properties to treat kinds of diseases such as dysentery, diarrhea, malnutrition, nosebleed, vomiting blood, hematuria (blood in urine), and malaria.

![Fig. 1. Anting-Anting or Earrings](image)

B. Bayam Duri or Spiny Pigweed

Spiny amaranth can be distinguished into ordinary amaranth and spiny amaranth. This weed is named “bayam duri” due to its many spines in the stalk. This is the reason why the plant gains its iconic meaning. In addition to spiny stalks, the veins of the leaves are also thorny. The leaf shape is rhomboidal, leaves alternate, broadly lanceolate to ovate. The leaf color is green and reddish in the middle.
People use this plant to treat gonorrhea, urinary retention, bronchitis, eczema, abscess and high fever, and to produce normal red blood cells.

C. Cakar Ayam “Chicken Claw” or Spikemosses
The iconicity of the shape can be seen in a traditional creeping heterosporous herb called cakar ayam or “chicken claw” or commonly known as spikemosses. This plant is iconic because the shape of the leaf resembles the chicken claw. Due to the iconic resemblance, the plant gains its name. In great detail, the leaf of cakar ayam is dissected tripinnate with even petiole. The color of the upper leaf is dark green while the color of the lower leaf is light green. The plants have simple, scale-like leaves which look like a chicken claw. This leaf is used to treat bronchitis, pneumonia, cough, scabies, hepatitis, edema, urinary tract infection, bone fracture, and rheumatism.

D. Bunga Kenop or Globe Amaranth
This type of flower is called “bunga kenop” or globe amaranth because the shape of the flowers resembles that of bulbs. In the Javanese language, kenop refers to light bulbs. The naming of the flower which is based on the shape is called iconicity. This plant is characterized by its reddish green and hairy stalk. The green pubescent leaf is ovate with an acute tip. The flower is a purple bulbous clumps resembling a garden lamp. In a certain cultural community, the herb is prized for its medicinal properties, such as to cure asthma, cough, conjunctivitis (pinkeye), headache, high temperature, and dysentery.

E. Ciplukan or Angular Winter Cherry
The iconic dimension in the medicinal herb called ciplukan lies in its shape. The shape of the fruits resembles small balls called “nyempluk” or “cipluk” in the Javanese language. The yellow-orange fruits are born inside a balloon-like calyx. Hence, the fruit gains its name “ciplukan”. In the Javanese culture, this erect herbaceous annual plant is used to treat diabetes, lung diseases, epilepsy, and head scabies.

F. Daun Sendok or Broadleaf Plantain
Commonly known as broadleaf plantain, plantago major is locally known as “daun sendok” or glossed as “spoon leaf.” The iconic dimension lies in the shape or form. The shape of daun sendok resembles a spoon, hence it gains its name due to its iconic resemblance to a kitchen utensil. This plant can be used to treat urinary tract infection, gonorrhea, kidney swelling, gallstone, and kidney stone.

G. Jambu Monyet or Cashew Nut
Anacardium occidentale, commonly known as cashew nut, is locally called “jambu monyet.” The naming of this tropical evergreen tree is not without meaning intended. “Jambu monyet” means monkey cashew. The naming is based on the shape or form of the fruit. The form or shape of the cashew fruit resembles a monkey or an ape hanging on the tree upside down. Due to its shape, the naming of “jambu monyet” can be classified as iconic. In a certain community, this medicinal herb can be used to treat diabetes, dysentery, and mouth ulcer.
H. **Kaki Kuda or Horse’s Hoof**

Centella asiatica is locally known as kaki kuda or “horse’s hoof.” The plant “kaki kuda” or “horse’s hoof” is iconic. The iconic aspect of kaki kuda lies in the leaf shape which resembles the horse’s hoof. In a certain cultural community, the plant is believed to be able to cure typhoid, headache, influenza, poisoning, and epilepsy.

![Fig. 8. Kaki Kuda “Horse’s Hoof”](image)

I. **Kecubung or Angel’s Trumpet Flower**

*Kecubung* or angel’s trumpet flower has an iconic nuance. *Cubung* or *cuwung* is a funnel-like conical shape. The iconic aspect lies in the shape of the flower which resembles a long pendulous trumpet or a funnel. Due to its trumpet-like shape, the medicinal herb gains its name, *kecubung*. In a certain cultural community, the *kecubung* flower is used to treat asthma, rheumatism, lower back pain, abscess and eczema. Let us observe the following illustration.

![Fig. 9. Kecubung or Angel’s Trumpet Flower](image)

J. **Keji Beling or White Butterfly**

*Clerodendrum calamitosum* L, commonly known as white butterfly, is locally known as “keji beling,” which literally means shards of broken glass. The name “keji beling” is iconic. The iconic dimension of the plant lies in its shape. The leaf of “keji beling” is iconized as “shards of glass” because the leaf has toothed edges like a sharp shard of glass. The leaf of *keji beling* is used to treat tumor, diabetes, liver, cholesterol, and snake-bites. The following image illustrates the iconicity of *keji beling*.

![Fig. 10. Keji Beling or White Butterfly](image)

K. **Kelapa or Coconut Tree**

The name “kelapa” is iconic. The metathesis of the name “kelapa (coconut)” is “kepala (head)” because the shape of coconut resembles the shape of a human head. Thus, it can be said that the name “kelapa” is iconic, instead of arbitrary. The coconut functions to cure poisoning, heart burn, dengue, toothache, influenza, and urinary stones.

![Fig. 11. Kelapa or Coconut Tree](image)

L. **Kembang Sepatu Sungsang or Spider Hibiscus**

The name “kembang sepatu sungsang” is iconic because the flowers have finely dissected petals. Literally “kembang sepatu sungsang” means “upside down hibiscus” because the frilly petals are arranged in topsy turvy, upside down like a breech baby. This traditional medicinal herb is different from other types, and its name is iconized with its shape.

![Fig. 12. Kembang Sepatu Sungsang or Spider Hibiscus](image)

M. **Kembang Sungsang or Flame Lily**

The name of this iconic medicinal herb is “kembang sungsang” which literally means “upside down flower.” The iconic aspect of the flower is the shape or form of the blossoming flower. The perianth segments which are accrescent during antithesis become reflexed. This position is called “sungsang” in Indonesian. In a certain cultural community, the flower can cure paralysis, high fever, gonorrhea, and cramps. Let us see the following illustration.

![Fig. 13. Kembang Sungsang or Flame Lily](image)

N. **Patah Tulang or Firestick Plant**

The iconic aspect of the plant called “patah tulang,” which literally means “fractured bones,” lies in the shape or form dimension. The twigs of the plant resemble the fractured bones. Therefore, it can be said that the naming of the plant as “fractured bones or patah tulang” has an iconic dimension. The plant is a type of hedging plant, which has many branches, and toxic milky white latex-like sap. This plant is used to cure fractured bones.
Other than medicines, the branches and twigs of this plant can be burned to expell mosquitos.

**O. Patikan Kerbau or Asthma Plant**

The plant “Patikan kerbau” or commonly known as asthma plant is a patropical weed whose wide leaves are often associated as buffalos, hence the name “buffalo plant”. Due to its characteristic, patikan kerbau is iconic. In a certain cultural community, the plant can be used to treat bronchitis, inflammation, asthma, dysentery, ulcerated stomach, diarrhea, and eczema. This prostrate annual herb grows trailing on the ground and multiplying with seeds. Let us see the illustration.

**P. Pecut Kuda or Blue Porterweed**

Commonly known as blue porterweed, blue snake weed or Brazilian tea, Pecut kuda, or literally “horse whip”, has an iconic dimension. The iconic aspect of the name lies on the shape of its long whip-like pedicels. Due to its resemblance to a whip, the herb gains its name. In a certain cultural community, the herb is brewed to cure urinary tract infection, bronchitis, leucorrhea or white vaginal discharge, and rheumatism. This disturbed terrain. Let us see the following illustration.

**Q. Tela Gantung or Papaya**

In the Javanese language, the widely-cultivated papaya is known as “tela gantung” or “tela gandhul”, which literally means hanging fruit. The naming of papaya in the local language is iconic. The iconic dimension of the name lies in the characteristic of the fruit which is hanging or attaching to the papaya single unbranched stem. The papaya leaves are large, deeply palmately lobed, with seven lobes. The flowers are white, and the ripe fruit feels soft and tastes sweet like melon and the skin has attained an amber to orange hue. The hollow of the papapa fruit is shaped like a star when cut diagonally. In a certain cultural community, the fruit is good to treat hypertension, kidney stone, malaria, leucorrhea, dysentery, acne, and grey hair. Let us see the following illustration.

**R. Sesuru or Spurge**

Euphorbia neriifolia is commonly known as spurge and locally known as sesuru. Sesuru is named after a suru, or a leaf spoon made of a folded banana leaf to ladle porridge used by the Javanese villagers in the past. Therefore, the name “sesuru” has an iconic dimension. This plant is used to treat abscess, asthma, snake bites, malaria, fever, and diarrhea. Sesuru is grown in the yard as hedging, or wild plants that grow on roadside, fields and coastal areas. Let us see the following illustration.

**S. Sosor Bebek or Cathedral-Bells**

Commonly known as cathedral-bells, Mexican loveplant, or miracle leaf, Kalanchoe pinnata is a succulent plant known locally as “sosor bebek” or “the duck’s beak.” Therefore, the naming of the plant has an iconic significance because the leaves resemble the beak of a duck. This herb is used to cure high fever, headache, cough, and urinary retention. The plants have whorled, fleshy oblong-lanceolate green leaves with purplish grey blotch underneath. The following image illustrates the iconicity.

**T. Srigading or Night-Flowering Jasmine**

Nyctanthes arbor-tristis is commonly known as night-flowering jasmine. In Indonesia, it is known as srigading. Gading means ‘elephant’s tusk’. However, if seen only from the image, it is difficult to see that the tip of the leaf resembles an elephant tusk.
However, in the triangulation, the expert verifies the fact. Thus, it can be confirmed that the plant “srigading” is iconic, instead of arbitrary as previously assumed by the researcher. In a certain cultural community, this plant is used to heal many types of diseases, such as malaria, skin rash, hiphone pain, lower back pain, menstrual pain, rheumatism, worms, cough, bronchitis, constipation, and dandruff.

U. Tapak Dara or Rosy Periwinkle

Commonly known as rosy periwinkle, caranthus roseus is locally known as “tapak dara” which literally means “pigeon’s footprint.” The iconic dimension lies in the shape of the leaf which resembles a pigeon’s footprint. Therefore, it is confirmed that the naming of the plant is iconic, instead of arbitrary. In a certain Javanese culture, the herb can be used to cure diabetes, hypertension, leukemia, asthma, bronchitis, ulcerated stomach, dysentery, abscess, scabies, burn, fresh wound, etc. This evergreen herbaceous plant is a shrub with the stem of small diameter, nodes and branches. The glossy green leaves are oval to oblong monocotyledon. The beautiful trumpet-like flowers are white to dark pink with a darker red centre, with a basal tube, soft hairs on the surface, and five petal-like lobes. The following image will clearly illustrate it.

V. Tapak Kuda or Bayhops

Commonly known as beach morning glory, goat’s foot, or bayhops, Ipomoea pes-caprae is locally known as tapak kuda which literally means “horse’s foot.” Therefore, it can be confirmed that the iconic aspect of the tradictional medicinal herb called tapak kuda lies in the shape or the form. The herb spreads out from the seaward slopes and grows on almost all parts of the dune. The wet and slippery sprawling runners have large brownish green two-lobed leaves. In a certain culture, this herb is used to treat rheumatism, stiff tendons, gum swelling, etc. The following image illustrates the iconicity.

W. Tapak Liman or Elephant Foot

Commonly known as prickly-leaved elephant foot, bull’s tongue, and ironweed, elephantopus scaber is locally known as tapak liman which literally also means “elephant’s foot.” The iconic dimension lies in the leaf which resembles an elephant’s foot. Therefore, the naming of the plant is iconic. In a certain cultural community, this herb is used to cure influenza, fever, tonsillitis, diarrhea, dysentery, snakebite, etc. This plant grows wildly by the roadsidies, paddy bunds, and lowlands. The following image illustrates the iconicity.

V. CONCLUSION

The plants discussed in this paper are all iconic. It means that each plant has the iconic meanings. The iconic meanings can be found in the naming of each plant and it is interrelated with the shape. It is expected that this helps the readers to know the rich treasure of Javanese flora, and also to understand the Indonesian people’s ingenious linguistic creativity in naming plants around them. Further studies about herbs and shrubs must be done by linguists to further describe the wealths of our nature by using the other research perspective.

ACKNOWLEDGEMENT

The writers would like to thank The United Board for Christian Higher Education, New York, The United States of America. Some of the figures in the text belong to the private collections and some others were taken from various sites in the webs [18], [19], [20]. The writers owe huge debts of gratitudes to them.

REFERENCE

AUTHORS’ PROFILE

Dr. R. Kunjana Rahardi, M.Hum., was born in Yogyakarta on October 13, 1963. He serves as the Head of the Master Program in the Indonesian Language and Literature Education, Faculty of Teachers Training and Education, Sanata Dharma University, Yogyakarta, Indonesia. Besides, he is also currently the Head of the Language and Arts Department. He graduated from the Doctorate Program of Gadjah Mada University in linguistics in 1999. The linguistic textbooks during his doctorate tenure are: Pragmatik: Kesantunan Imperatif in Bahasa Indonesia (Erlangga Publisher Jakarta, 2009), Asyik Mengarang (Amara Books Publisher Yogyakarta, 2013) on Impoliteness in Indonesian. He did the research consecutively for five years (in 2013 until 2015 and in 2016 until 2018) on Impoliteness in Indonesian Language, Phatic Communion in Indonesian Language, Contexts in Pragmatics, with the grants given by Directorate of Research and Community Service, Ministry of Research, Technology and Higher Education, Republic of Indonesia.

Dr. Yullana Setyaningsih, M.Pd., was born in Surakarta on October 1, 1963. She serves as the Lecturer of Indonesian Language and Literature Education Study Program, Faculty of Teachers Training and Education, Sanata Dharma University, Yogyakarta. She served as the Head Department of the Indonesian and Literature Study Program for two periods starting from 2009 until 2017. She graduated from the Doctorate Program of Indonesian Education University in Indonesian Education Doctorate Study Program in January 2007. The textbooks during her doctorate tenure are: Fonologi dalam Bahasa Indonesia (Universitas Sanata Dharma Press, Yogyakarta, 2014), Pragmatik: Fenomena Ketidaksantunan Berbahasa (Erlangga Publisher Jakarta, 2016) as the co-writer, Menulis Artikel Jurnal: Panduan Mencipta Karya Ilmiah Bermutu with the grants given by Directorate of Research and Community Service, Ministry of Research, Technology and Higher Education, Republic of Indonesia.

Rishi Purnama Dewi, S.Pd., M.Hum. is currently a lecturer in language teaching and teaching media as well as Indonesian for foreigners (BIPA) at Sanata Dharma University, Yogyakarta, Indonesia. She holds a Magister degree in Language Teaching from Yogyakarta State University (UNY), Yogyakarta, Indonesia. Her main research interest lies in the field of Language Teaching, and Language Teaching Media, Indonesian for Foreign Speakers, Local Wisdom Values. Joining with her colleagues, she also did some researches on Pragmatik, Sociopragmatics, Ecolinguistics. She is now the head of Indonesian and Literature Education program.