Title

Study on lichen diversity at Ban Khok Ok mangrove forest, Hat Samran district, Trang province

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Hat Samran District, Trang Province

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Abstract or summary

The objective of this research is to study the diversity of lichens and study the climate, temperature, and humidity at Ban Khok Ok mangrove forest, Hat Samran district, Trang province. CU smart lens Size20x Studies have shown that there are a variety of lichens, grouped into 2 groups: highly durable; 4 species found Pyxine cocoes, Anthracothecium, Cryptothecia, Amandinea extunata Durable group found 5 types as follows: Dirinaria, Graphid, Physcia dimidiata, Rinodina, Chrysothrix

Study the weather by studying the temperature and relative humidity of the air at Ban Khok Ok mangrove forest, Hat Samran district, Trang province.

Using the Maxima-Minima-Thermometer instrument, it was found that the temperature was approximately 31 degrees Celsius.

Study the relative humidity of the air by using a wet-dry bulb hygrometer.

It was found that the air relative humidity times 1, 2 and 3 had relative humidity values of 72%, 92%, 92%, respectively, and the mean relative air humidity value was 85.3% (HR).

Importance: Study the diversity of lichens and measure temperature and humidity.

Introduction

Origin and significance

Thailand is a biodiverse country, i.e. genetic diversity, species diversity, and ecosystem diversity, with at least 1200 plant genetics, including over 3000 types of fungi, 633 types of ferns, and more than 1000 types of orchids. In particular, lichens are important microspecies in the ecosystem. It has diverse relationships with other species in the ecosystem as well as species change and the survival of lichens found in extreme cold regions like the polar regions to extreme hot areas like deserts. It can be found at all altitudes, from the sea to high mountain peaks. It may bring about a way to conserve the genetics of other organisms and lichens in the face of global climate and environmental changes.

so The main objective of this study was to study the diversity of species in Ban Khok Ok mangrove forest, Hat Samran district, Trang province.

Research Questions

Diversity of lichens in Ban Khok Ok mangrove forest, Hat Samran district, Trang province Is there a difference?

hypothesis

Lichens in the mangrove beyond the hump house Hat Samran District, Trang Province There is a variety of species.

Research Objectives

To study the diversity of lichens in Ban Khok Ok mangrove forest, Hat Samran district, Trang province.

Research Scope

Study at Ban Khok Ok mangrove forest, Samran beach district, Trang province.

Methods and materials

Materials and equipment and methods of conducting research

1. CU Smartlens
2. MAXIMUM - MINIMUM – THERMOMETER
3. Wet-bulbous hygrometer

How to conduct the study

1. Using a 20X CU Smart Lens to study the characteristics of different types of lichens, the group recorded and recorded the characteristics of lichens in the mangrove area of Ban Khok Ok
2. Identify and group the species of lichens found at various points in Ban Khok Ok mangrove forest, Hat Samran district, Trang province
3. Temperature Check (Globe Thailand)

   3.1 Install the thermometer in the tool shelter cabinet

   3.2 Reset the thermometer Solar noon

   3.3 Let the thermometer take a temperature reading for 1 day.

   3.4 Record data at noon the next day
4. Moisture Measurement (Globe Thailand)

   4.1 Wet-bulbous hygrometer-dry bulb

   Determination of relative humidity is done by removing the temperature difference of a dry bulb thermometer and a wet bulb thermometer. Compared to the relative humidity table attached with the meter

   4.2 Digital hygrometer

   Relative humidity readings directly from the meter

Result and data

Table 1 Geographical coordinates

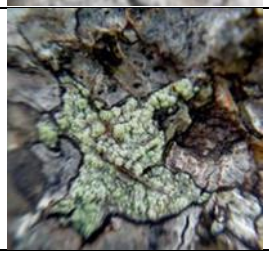
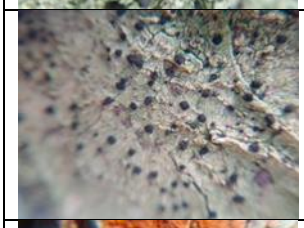
Study Point

A study on the diversity of lichens in the Ban Khok Ok mangrove forest area was conducted. Hat Samran District, Trang Province

Study points	Geographical coordinates	
Ban Khok Ok mangrove forest, Samran beach district, Trang province	Latitude (N)	Longtitude (E)
	7.220321	99.596246

Table 1 Characteristics of lichens in Ban Khok Ok mangrove forest, Hat Samran district, Trang province

Mangrove tree	Types of lichens
	Scientific Name: Graphid Family: Graphidaceae
	Scientific Name: Cryptothecia
	Scientific Name: Physcia dimidiata Family: Physciaceae
	Scientific Name: Rinodina Family: Physciaceae

	Scientific Name: Pyxine cocoes Family: Physciaceae
	Scientific Name: Dirinaria Family: Physciaceae
	Scientific Name: Anthracothecium Family: Pyrenulaceae
	Scientific Name : Physcia dimidiata Family Physciaceae
Red Prong Tree	**Types of lichens**
	Scientific Name : Amandinea extunata Family: Physciaceae
	Scientific Name : Anthracothecium Family: Pyrenulaceae
	Scientific Name : Chrysothrix Family :Chrysothricaceae
White Tabun Tree	**Types of lichens**

	Scientific Name: Cryptothecia

From the table showing the species of lichens, it was found that there are 9 types of lichens in Ban Khok Ok mangrove forest : Graphid, Cryptothecia, Physcia dimidiata, Rinodina, Pyxine cocoes, Dirinaria, Anthracothecium, Amandinea extunata, Chrysothrix.

Table 2 Temperature at Ban Khok Ok mangrove forest, Hat Samran district, Trang province

	Temperature (℃)			average
	1st time	2nd time	3rd time	
Mangrove forest area at Ban Khok Ok, Hat Samran District, Trang Province	31℃	32℃	30℃	31℃

From the temperature measurement table at Ban Khok Ok mangrove forest, Hat Samran district, Trang province. In conclusion, a total of three measurements were measured, 31, 32 and 30 ℃ respectively, and the average temperature was about 31℃ as shown in the table.

Table 3 Moisture value at Ban Khok Ok mangrove forest, Hat Samran district, Trang province

Times	dry	wet	difference	Air relative humidity
1	31℃	29℃	2℃	72% (HR)
2	30℃	28.7℃	1.3-1℃	92% (HR)
3	29℃	28℃	1℃	92% (HR)

From the air relative humidity measurement table at Ban Khok Ok mangrove forest, Samran beach district, Trang province. In conclusion, times 1, 2 and 3 had air relative humidity values of 72%, 92%, 92%, respectively, and the average relative air humidity value was 85.3% (HR).

Discussion

According to the study, At Ban Khok Ok mangrove forest, Hat Samran district, Trang province. There are many types of lichens, grouped into 2 groups. meet 4 kind Pyxine cocoes, Anthracothecium, Cryptothecia, Amandinea extunata Durable Group Found 5 The type is Dirinaria, Graphid, Physcia dimidiata, Rinodina, Chrysothrix The relationship between lichen species and tree species that provide habitat for lichens has been studied. Several spots were found on the tree. At Ban Khok Ok mangrove forest, Hat Samran district, Trang province. There are various lichens as follows: Mangrove tree Lichens are found, including species Pyxine cocoes, Anthracothecium, Cryptothecia, Amandinea extunata, Dirinaria, Graphid, Physcia dimidiata, Rinodina Red prong trees found lichens include: Amandinea extunata, Anthracothecium, Chrysothrix White tabun lichens found include: Cryptothecia With temperature measurement at Ban Khok Ok mangrove forest, Hat Samran district, Trang province. A total of three measurements were measured, 31, 32 and 30 ◦c Follow the Secret It has an average temperature of 31. °C and measure air relative humidity. At Ban Khok Ok mangrove forest, Hat Samran district, Trang province. 1 2 and 3 There is an air relative humidity value. 72% 92 % 92% And there is a relative relative humidity mean as follows: 85.3% (HR).

Conclusion

According to the study, in the mangrove forest area of Ban Khok Ok, Hat Samran District, Trang Province, there are a variety of lichens, grouped into 2 groups: highly durable and durable. ℃ The average relative humidity of the air is 85.3% (HR)

Citations

[Online].Accessed from: www.greenworld.or.th.

[Online].Accessible from: http://www.lichen.ru.ac.th/index.php/lichen/what

[Online].Accessed from: https://www.mnre.go.th/loei/th/news/detail/%2044621

[Online].Accessed from: http://www.satriwit3.ac.th/external_newsblog.php?links=2101%20Lichen%20Biological%20Air%20Ouality%20Indicators

[Online].Accessed from: https://km.dmcr.go.th/c_11.