A Study of the diversity of mollusks in mangroves and Samae Forests Mangrove Area Ban Mod Tanoi Community, Trang Province.

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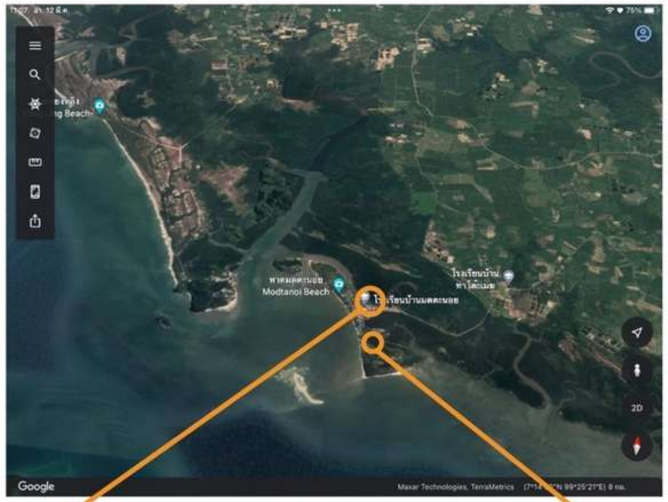
Introduction

Samae forest

Mangrove forest

Diversity of mollusk

Study site.



Mangrove forest and Samae forest
Baan Mod Tanoi, Koh Libong,
Kantang, Trang Province.

Latitude 7.3064 degrees north.
Longitude 99.4204 degrees east.

Mangrove forest

Samae forest

Research Questions

1. Soil quality of mangrove and Samae forests Ban Mod Tanoi, Koh Libong, Kantang Trang different or not?

2. Soil quality of mangrove and Samae forests Ban Mod Tanoi, Ko Libong, Kantang, Trang affect the diversity of mollusk or not and how it affects ?

Hypothesis

1. Soil quality of mangrove forest and Samae forest is different.

2. Soil quality of mangroves and Samae forests affects the diversity of mollusk.

Objectives

Study the soil quality of mangrove and Samae forests Baan Mod Tanoi, Koh Libong, Kantang, Trang.

Study the diversity of mollusk in mangrove forests and Samae forests, Baan Mod Tanoi, Koh Libong, Kantang, Trang.

Materials

Infrared thermometer

source: https://www.scilution.co.th/product/muffle-furnace-xkl15/

Soil pH meter

source: https://www.richmoto.net/product/ph01c-3-in-1-เครื่องวัดความชื้น-ความเข้มแสง-พีเอช-ในดิน/

Tape measure

source: https://www.goodchoiz.com/เทปวัดสายไฟเบอร์กลาสยาว30เมตรstanleyรุ่น34262

Materials

Soil test kit

source: https://www.maidadtools.com/product/87/ชุดวัดปุ๋ย-npk-ในดิน-และค่า-ph-ในดิน-ยี่ห้อ-hanna

Soil dryer

source: https://www.scilution.co.th/product/muffle-furnace-xkl15/

Muffle furnace

source: https://www.scilution.co.th/product/muffle-furnace-xkl15/

Research Methods

soil properties

1 — 2 — 3

study area

- sampling an area of 10x10 square meters in each forest
- Set 3 study points.

temperature data

- Measure the soil temperature with a thermometer
- Collect data for all 3 study points.
- Data were analyzed by t-test statistics.

pH data

- Measure the pH with a pH meter.
- Collect data for all 3 study points.
- Data were analyzed by t-test statistics.

Research Methods

soil properties

4

Soil moisture

- Soil samples were collected at all 3 study sites.
- Soil drying at temperature 120˚c for 24 hours
- Data were analyzed by t-test.

5

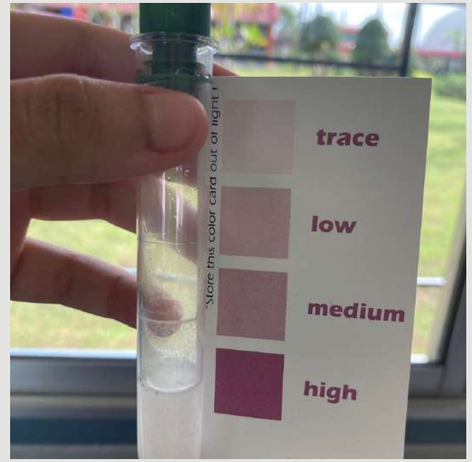
organic matter

- Soil samples were collected at all 3 study sites.
- Burn the clay at 450˚c for 4 hours.
- Data were analyzed by t-test statistics.

6

soil minerals

- Soil samples were collected at all 3 study sites.
- Check using the NP K assay.
- Data were analyzed by t-test statistics.



Research Methods

diversity of mollusk

1 — 2 — 3

study area

- sampling an area of 10x10 square meters in each forest
- Set 3 study points.

diversity of mollusk

- Explore the types of mollusks found in each forest.
- Collect the number of mollusks of each species found.
- Collect data in the study point.

Size 50x50 square centimeters, all 3 points

Analyze data on diversity of mollusks.

- Average value of each mollusc species found in each forest.
- The amount of shellfish found in each forest.

(units/square meter)

Results

soil grain characteristics

From the study of soil texture in mangrove forests and Samae forests It was found that soil texture and soil particle size.

Shows soil characteristics of mangrove and Samae forests.

Study point	Soil characteristics	Soil particle size
Mangrove forest	Clay	<0.002 mm.
Samae forest	Sandy soil	0.05-2.00 mm.

Results

soil grain characteristics

Pictures of soil texture in mangrove forests and Samae forests.

Mangrove forests

Samae forests

Results

From the study of temperature, pH, moisture and organic matter Within the soil of the mangrove forest and Samae forest.

Show soil temperature, pH value, soil moisture organic matter of the mangrove forest and the Samae forest.

Study point	Temperature (°C)	pH	Moisture content (%RH)	organic matter (%)
Mangrove forest	28.63±0.18	7.5±0.1	30.72±0.75	5.94±0.56
Samae forest	31.48±0.32	7.9±0.1	25.56±0.31	1.73±0.09

Results

From the study of temperature, pH, moisture and organic matter in the soil and analyzing soil quality by t-test at statistical significance level .05.

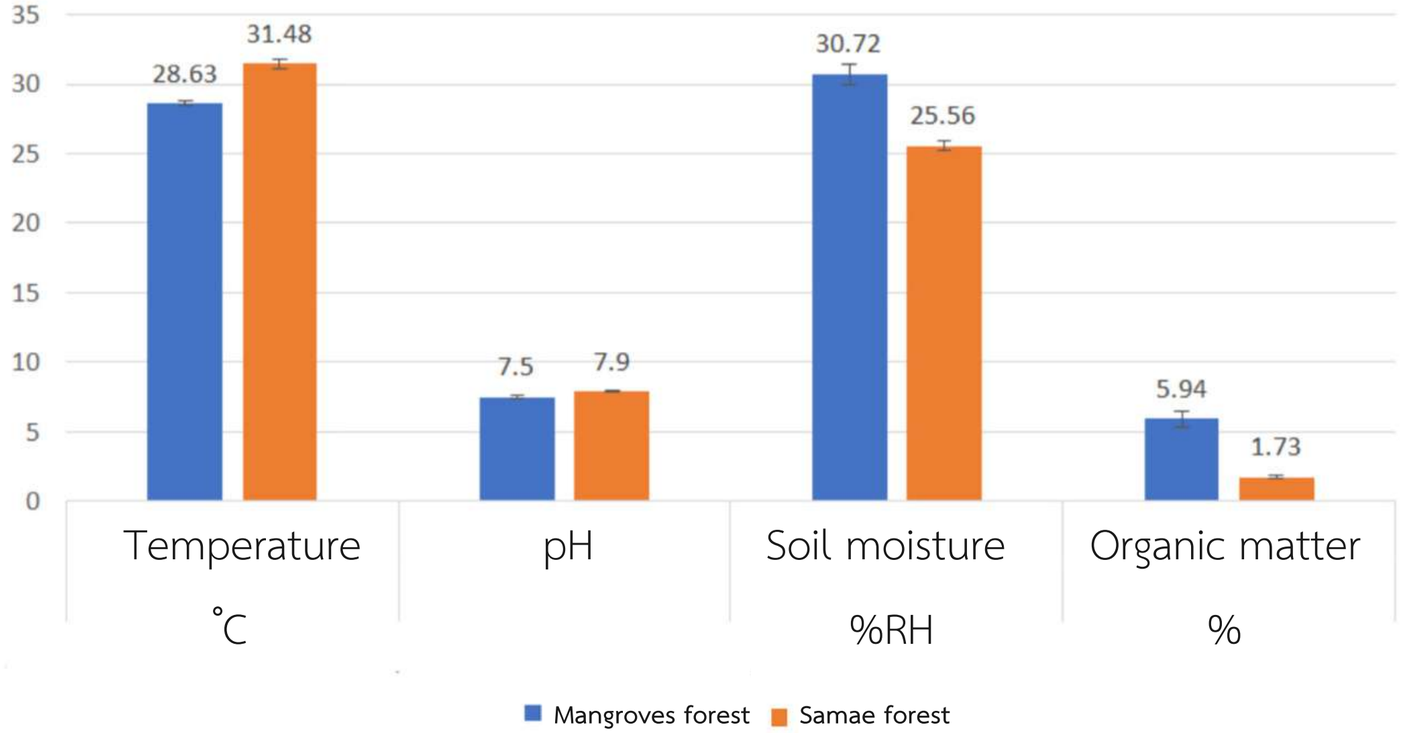
Soil temperature and soil pH of the two sites were not different.

Soil moisture and the value of organic matter in both areas are different with statistical significance .05.

Results

Display temperature, soil moisture, pH and organic matter in the soils of mangrove forests and Samae forests.

Soil quality



Temperature and pH values

*P>0.05

Moisture and organic matter

*P<0.05

Results

Study of minerals Within the soil of the mangrove forest and Samae forest.

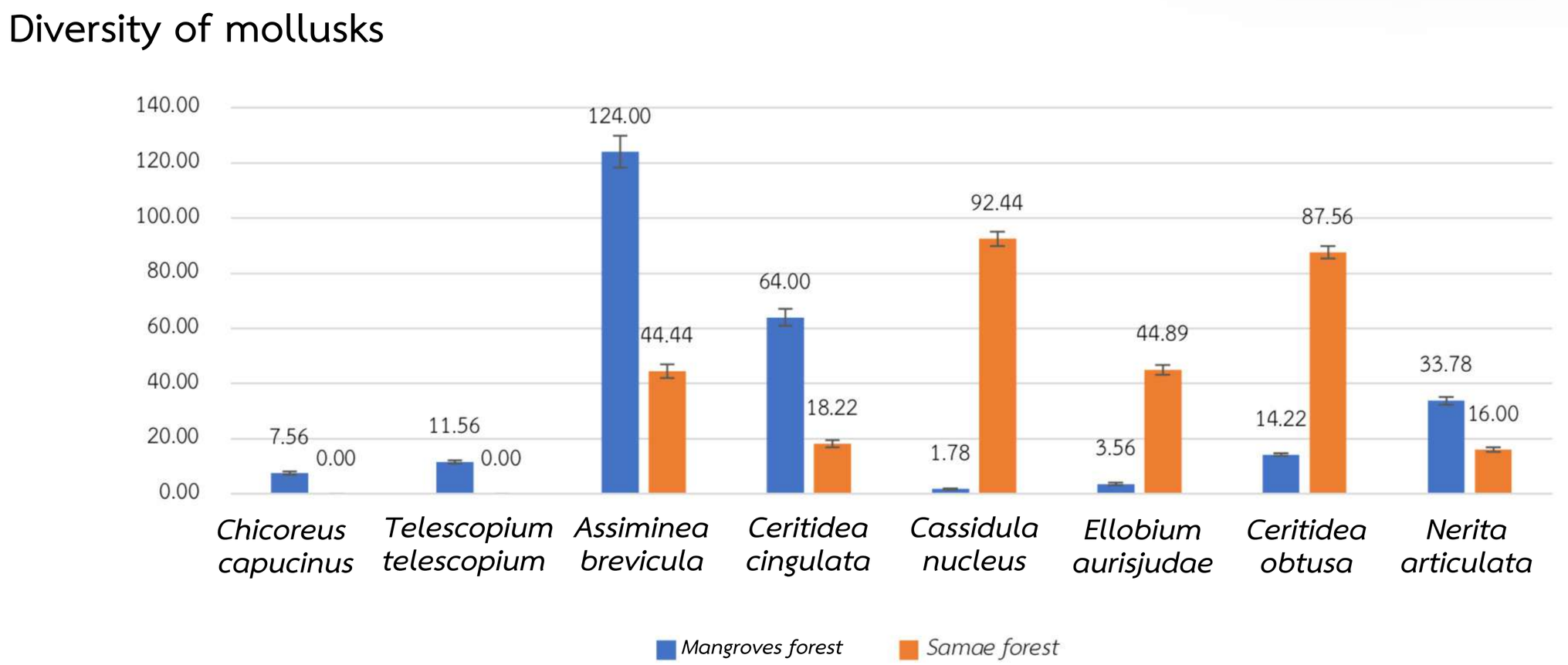
Shows the minerals in the soil of mangrove and Samae forests.

Study point	Minerals		
	N	P	K
Mangrove forest	trace	medium	low
Samae forest	trace	trace	trace

Results

diversity of mollusk

Shows the density of each species of mollusks be found in mangroves and Samae forests. (body/square meter)



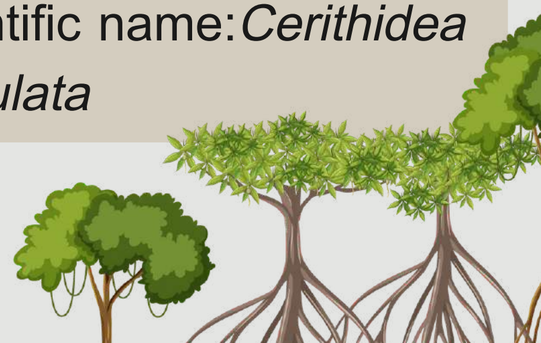
Species of mollusk

Mangrove murex
scientific name:*Chicoreus capucinus*

Telescope snail
scientific name:*Telescopium*

Red mangrove shell
scientific name:*Assiminea brevicula*

Girled horn shell
scientific name:*Cerithidea cingulata*



Species of mollusk

Nucleus cassidula
scientific name:*Cassidula nucleus*

Judas ear cassidula
scientific name:***Ellobium aurisjudae***

Lined nerite
scientific name:*Nerita articulata*

Obtuse horn shell
scientific name:*Cerithidea obtusa*

Conclusion

From studying the diversity of mollusks and soil quality in the mangrove forests and Samae forests.

When analyzing quality differences Soil by t-test statistics.
At the statistical significance level of .05, it was found that soil temperature and pH The soils of the two areas were not different.

Soil moisture and organic matter values of the soil around the mangrove forest and Samae Forest is different. statistically significant .05.

Conclusion

Assiminea brevicula are most found in mangroves, 124 per square meter.

Cassidula nucleus be found in Samae forest, 92-93 per square meter.

Chicoreus capucinus and *Telescopium telescopium* are not found in Samae forests.

Discussion

Moisture and organic matter values in mangrove soil were higher than that of Samae forest. Because the mangrove soil can absorb water better, causing the water to stay in the water for a long time. and mineral absorbent soil various sediments from flooded sea water

Telescopium telescopium are not found in Samae forest. because they like to live in muddy soil *Chicoreus capucinus* are not found in Samae forest. Because they like to live around the roots of trees. And the mangrove forest has a lot of tree roots.

Acknowledgement

Institute for the Promotion
of Teaching Science
and Technology
IPST

Walailak University

The GLOBE program

Director and teachers
Princess Chulabhorn Science
High School Trang

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Thank you for your attention