MODELLING TREE SPECIES COMPOSITION AND CONFIGURATION IN URBAN PARKS BASED ON SQUIRRELS BEHAVIOR PATTERN

Photo: Noraini Bahari (2016)
AIM

TO CONSTRUCT A MODEL OF TREE SPECIES COMPOSITION AND CONFIGURATION FOR THE PROVISION OF CULTURAL ECOSYSTEM SERVICES IN URBAN PARKS
OBJECTIVES

i. To investigate an association between squirrels behavior and tree characteristics in urban parks.

ii. To identify tree species composition and configuration which influence each of squirrels behavior.

iii. To model tree species composition and configuration for promoting recreational observations of squirrels as cultural ecosystem service provider in urban parks.
STUDY SITE 01

Botanical Garden, Putrajaya
STUDY SITE 02

Taiping Lake Garden, Taiping, Perak
DATA ANALYSIS

Botanical Garden, Putrajaya
SQUIRREL’S BEHAVIOUR

Forage
Feeding
Chasing
Resting
Observing
Grooming
Vocalization
Travelling
Nesting
<table>
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<tr>
<th>Sighting Individual</th>
<th>Squirrel Behavior</th>
<th>Tree Species</th>
<th>Tree Storey (m)</th>
<th>Observation Period</th>
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## SqBehave * TreeStorey Crosstabulation

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### Chi-Square Tests

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<td>Likelihood Ratio</td>
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<td>Linear-by-Linear Association</td>
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*a. 16 cells (80.0%) have expected count less than 5. The minimum expected count is .14.
TREE PROFILE OF EACH BEHAVIOR

FORAGE ACTIVITY
Morning / Sunny

Legend:
- 0700 - 0759
- 0800 - 0859
- 0900 - 0959
- 1000 - 1059
- 1100 - 1200

SQUIRREL ACTIVITIES ON DIFFERENT TREE CHARACTERISTICS AT BOTANICAL GARDEN, PUTRAJAYA.

ELEVATION A - A’
Scale: NTS

POINT 01
ENTRANCE AND PARKING AREA

TREE PROFILE OF EACH BEHAVIOR
TREE PROFILE OF EACH BEHAVIOR

FEEDING ACTIVITY
Morning / Sunny

Legend:
- 0700 - 0759
- 0800 - 0859
- 0900 - 0959
- 1000 - 1059
- 1100 - 1200

ELEVATION A - A’
Scale: NTS

SQUIRREL ACTIVITIES ON DIFFERENT TREE CHARACTERISTICS AT BOTANICAL GARDEN, PUTRAJAYA.

POINT 01
ENTRANCE AND PARKING AREA

TREE PROFILE OF EACH BEHAVIOR
TREE PROFILE OF EACH BEHAVIOR

TRAVELLING ACTIVITY
Morning / Sunny

ELEVATION A - A’
Scale : NTS

SQUIRREL ACTIVITIES ON DIFFERENT TREE CHARACTERISTICS AT BOTANICAL GARDEN, PUTRAJAYA.

POINT 01 ENTRANCE AND PARKING AREA
TREE PROFILE OF EACH BEHAVIOR

CHASING ACTIVITY
Morning / Sunny

ELEVATION A - A’
Scale : NTS

SQUIRREL ACTIVITIES ON DIFFERENT TREE CHARACTERISTICS AT BOTANICAL GARDEN, PUTRAJAYA.

POINT 01
ENTRANCE AND PARKING AREA
TREE PROFILE OF EACH BEHAVIOR

VOCALIZATION ACTIVITY
Morning / Sunny

ELEVATION A - A'
Scale: NTS

SQUIRREL ACTIVITIES ON DIFFERENT TREE CHARACTERISTICS AT BOTANICAL GARDEN, PUTRAJAYA.

POINT 01
ENTRANCE AND PARKING AREA

TREE PROFILE OF EACH BEHAVIOR
NESTING ACTIVITY
Morning / Sunny

ELEVATION A - A'
Scale : NTS

SQUIRREL ACTIVITIES ON DIFFERENT TREE CHARACTERISTICS AT BOTANICAL GARDEN, PUTRAJAYA.

POINT 01 ENTRANCE AND PARKING AREA

TREE PROFILE OF EACH BEHAVIOR
COMPOSITE TREE PROFILE OF EACH BEHAVIOR

OVERALL ACTIVITY
Morning / Sunny

ELEVATION A - A'
Scale: NTS

SQUIRREL ACTIVITIES ON DIFFERENT TREE CHARACTERISTICS AT BOTANICAL GARDEN, PUTRAJAYA.

POINT 01
ENTRANCE AND PARKING AREA

COMPOSITE TREE PROFILE OF EACH BEHAVIOR
PRELIMINARY RESULTS

i. Most frequently seen at heights between 5 and 10 m. Less observed on the ground and above 15 m in the trees.

ii. Most active in the early morning with the activity recorded higher from 7.00 to 10.00 a.m.