

Fern guide to S.C.E.P.T.R.E.

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Abstract: A general guide to the most common ferns of S.C.E.P.T.R.E. was created. This guide is an expansion of the TAMU 1996 guide to common plants of S.C.E.P.T.R.E. The fern guide provides the family name, scientific name, a brief description and photograph of each fern and its sori pattern. Also included is a glossary of fern terms and a description of fern families represented in the guide.

Introduction

The plethora of ferns in the area led the authors to create the fern guide.

Materials and Methods

Fern specimens were collected on the trail to Mt. Joy, up the right fork, also about half way down Massacre Trail NW of the Guest House, and on the trail down to the stream. The specimens were identified through use of the herbarium. The location where each specimen was collected was marked with orange field tape, tied to the plant, and numbered. Dr. James Woolley aided in the photography. Both a full specimen and spore pattern (if the fern was sporulating) were taken. Descriptions were written on each specimen including; where it was found, a brief description, and if it was terrestrial or epiphytic. Descriptions of the plants were typed in the computer, and printed; they were then glued in the guide with the pictures.

Results

The field guide to the ferns of S.C.E.P.T.R.E. has 15 specimens, it contains a table of contents, a guide to the fern families and a glossary of terms, 15 pages of fern identification photos, descriptions and sori patterns.

Discussion

This guide is not complete. There are over 100 species in the herbarium, of Dominican ferns collected by Dr. Steven Hill. A knowledge of ferns or resource books would be a suggested aid to successfully continue and complete this guide.

Common Ferns of S.C.E.P.T.R.E.



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Table of Contents

Glossary of Fern Terms	1
Common Fern Families on S.C.E.P.T.R.E.	2
<i>Trichomanes krausil</i>	3
<i>Adiantum tetaphylum</i>	4
<i>Adinatum trapeziforme</i> L. [introduced]	5
<i>Ananthacorus angustifolius</i> (Sw.) Underw.	6
<i>Blechnum occidentale</i> L.	7
<i>Campyloneuron phylitidis</i> (L.) C. Presl	8
<i>Micogramma lycopodioides</i> (L.) Copel.	9
<i>Nephrolepis hirsutula</i> c. <i>Superba</i>	10
<i>Nephrolepis rivularis</i> (vahl) Mett. ex Kurg.	11
<i>Pecluma pectinata</i> (L.) Price	12
<i>Pityrogramma calomelanos</i> (L.) Link	13
<i>Pleopeltis astrolepis</i> (Liebm.) Fourn.	14
<i>Saccoloma inaequale</i> (Kunze) Mettanius	15
<i>Tectaria incisa</i> cav.	16
<i>Thelypteris dentata</i> (Forssk.) E. St. John	17

Glossary of Fern Terms

Blade- the expanded, leafy portion of a frond.

Epiphyte- a plant growing on or attached to another plant, but not parasitic.

Fern- vascular plants that reproduce by spores. They have two distinct generations.

Fiddlehead- structure arising from the middle of the plant that unrolls into new fronds.

Frond- leaf of a fern including the stipe and blade.

Pinna- a primary division of the compound blade of a fern.

Pinnule- a secondary or tertiary subdivision of a blade, attached at one point only.

Rachis- The main axis (or midrib) of a compound fern frond.

Sorus (pl. sori)- a cluster of sporangia.

Sporangium (pl. sporangia)- a minute capsule containing spores.

Spore- a one-celled, asexual reproductive body, usually having a hard external wall of characteristic shape or appearance according to the particular species. Spores range in size from dustlike to the size of a grain of salt.

Stipe- the stalk of a fern frond, corresponding in function to the petiole of an angiosperm leaf.

Terrestrial- growing on the ground.

Common Fern Families on S.C.E.P.T.R.E.

Hymenophyllaceae- Terrestrial or epiphytic. Most commonly found on moist rocks, trees and stream banks. The leaves are very thin (only one cell thick), marginal sori, and mostly tropical.

Polypodiaceae- Typically epiphytic with simple leaves, moundlike sorus, and chiefly tropical (a few temperate).



Hymenophyllaceae

Trichomanes kraussii

This is a small moss-like fern that is only one cell layer thick. It can be found on the large buttress tree on the stream trail. This is an epiphytic fern with no apparent spore pattern.



Polypodiaceae

Adiantum tetraphyllum Hemt. Bonpl. ex Willd.

The sori along the edges of the underside of the pinnules resemble small caterpillars. This fern was found on the stream trail as a terrestrial fern.



Polypodiaceae

Adiantum trapeziforme L. [introduced]

Found above burned cabin on Mt. Joy. Terrestrial fern resembling a maidenhair fern.



Polypodiaceae

Ananthacorus angustifolius (Sw.) Underw.

Found on both Mt. Joy and Stream Trails. Epiphytic with thin leathery fronds.



Polypodiaceae

Blechnum occidentale L.

Found on the trail to Mt. Joy and the stream trail. Spores run along the midrib of each pinnule. Most commonly found to be terrestrial, but may sometimes be epiphytic.



Polypodiaceae

Campyloneuron phylitidis (L.) C.Presl

Found on trail to Mt. Joy. Relatively low epiphyte. Long leathery fronds with net venation.



Polypodiaceae

Microrgramma lycopodioides (L.) Copel.

This was found on the tree at the front corner of the Archbold residence. The fern is epiphytic.



Polypodiaceae

Nephrolepis hirsutula cv. *Superba*

No evident spore pattern. Found NW of Springfield guesthouse. This is a terrestrial fern.

Polypodiaceae

Nephrolepis rivularis (vahl) Mett. ex Krug.

Found at Mt. Joy by the front gate to the trail. Mainly terrestrial. Small white sori on the leaf margins.



Polypodiaceae

Pecluma pectinata (L.) Price

This was found on the stream trail. It is most commonly terrestrial, but is sometimes epiphytic.



Polypodiaceae

Pityrogramma calomelanos (L.) Link "silverback fern"

Found at burned cabin on Mt. Joy. Terrestrial fern with deeply lobed pinnules alternately placed along rachis.



Polypodiaceae

Pleopeltis astrolepis (Liebm.) Fourn.

Found behind Springfield guesthouse. The sori are oblong and run in two rows along midrib of pinnules. This is an epiphytic fern.



Polypodiaceae s.l.

Saccoloma inaequale (Kunze) Mettanius

The spores are in small, seed-like cases along the pinnules. It was found on the large buttress tree on the stream trail. This fern can be terrestrial and epiphytic.



Polypodiaceae

Tectaria incisa Cav.

Spores are along both sides of the lateral veins. Found on the trail to the stream. This is a terrestrial fern.



Polypodiaceae

Thelypteris dentata (Forssk.) E. St. John

Commonly found terrestrial fern in Springfield Complex. Pinnately divided pinna.