

ALIEN PLANT



ALIEN PLANT

**NON-INDIGENOUS
PLANT**

ALIEN PLANT

**NON-NATURALIZED
ALIEN PLANT
VS
NATURALIZED
ALIEN PLANT**

**NON-NATURALIZED
ALIEN PLANT**

**NON-NATURALIZED
ALIEN PLANT**



EG

**FEW
COLLECTION RECORDS**

**NON-NATURALIZED
ALIEN PLANT**

NON-NATURALIZED ALIEN



GARLIC MUSTARD

ALLIARIA PETIOLATA



**NATURALIZED
ALIEN PLANT**

**NATURALIZED
ALIEN PLANT**



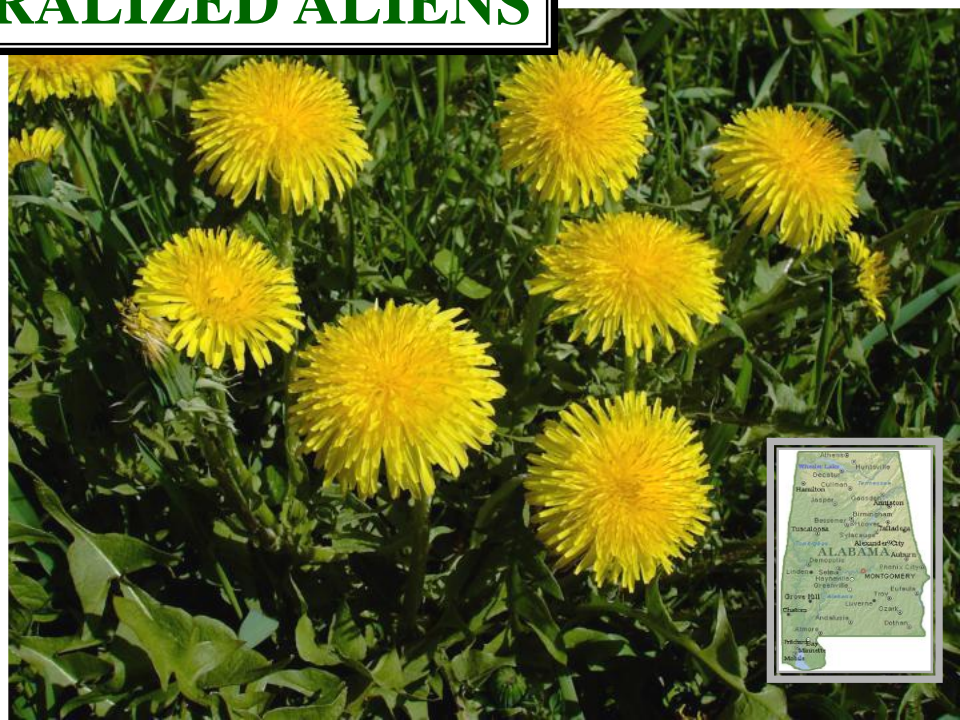
EG

**MANY
COLLECTION RECORDS**

**NATURALIZED
ALIEN PLANT**



ALABAMA NATURALIZED ALIENS





KUDZU





KUDZU



PRIVET

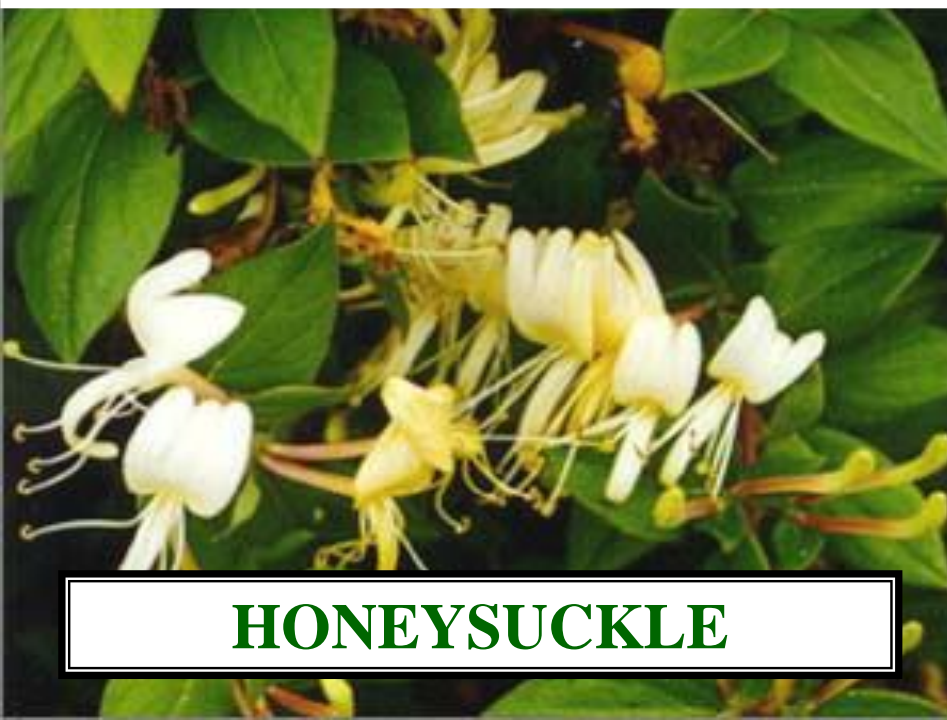




KUDZU



PRIVET



HONEYSUCKLE

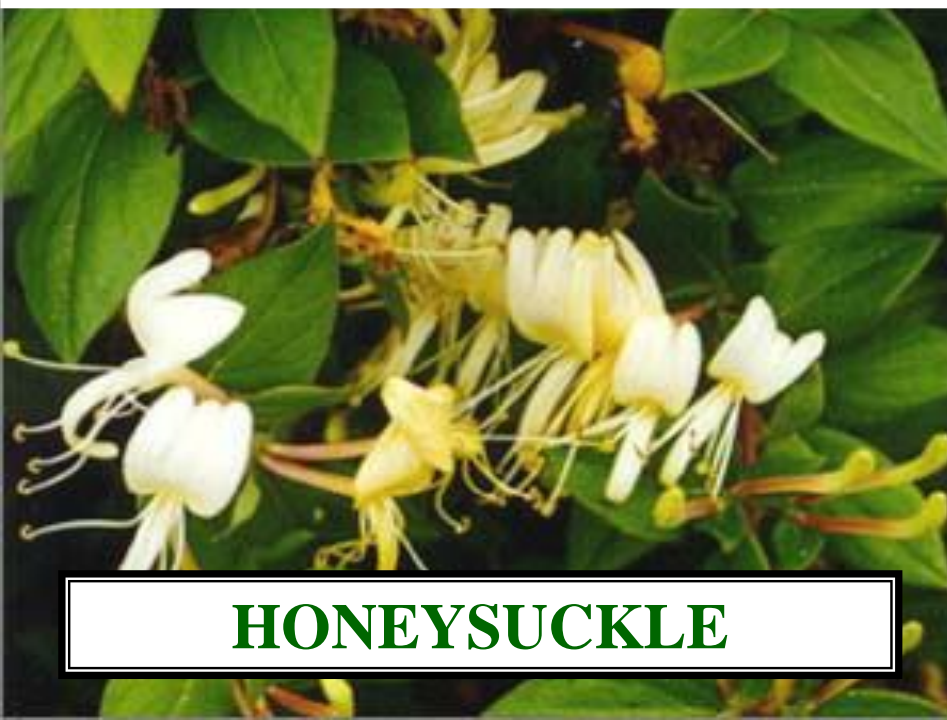




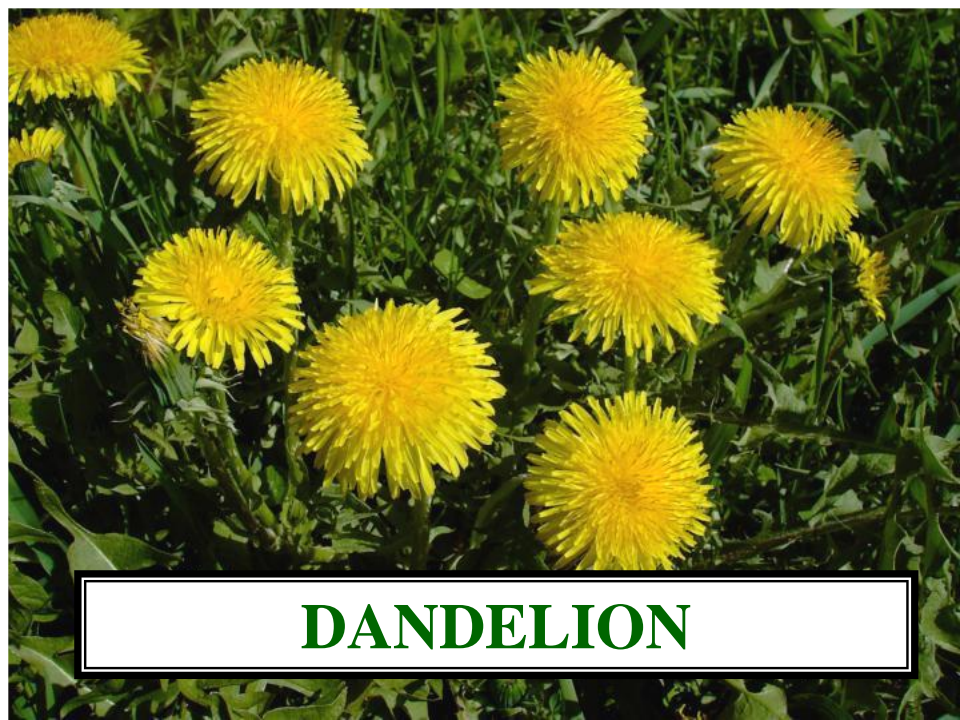
KUDZU



PRIVET



HONEYSUCKLE



DANDELION

PLANT TAXONOMY DISCIPLINES



FLORISTIC STUDIES
MONOGRAPHIC STUDIES
SYSTEMATIC STUDIES

PLANT TAXONOMY
DISCIPLINES

MONOGRAPHIC STUDIES

MONOGRAPH

MONOGRAPHIC STUDIES



**UP-DATED CLASSIFICATION
BASED ON PREVIOUSLY
PUBLISHED DATA,
INTEGRATED WITH, NEW DATA**

**MONOGRAPHIC
STUDIES**



SYNONYM



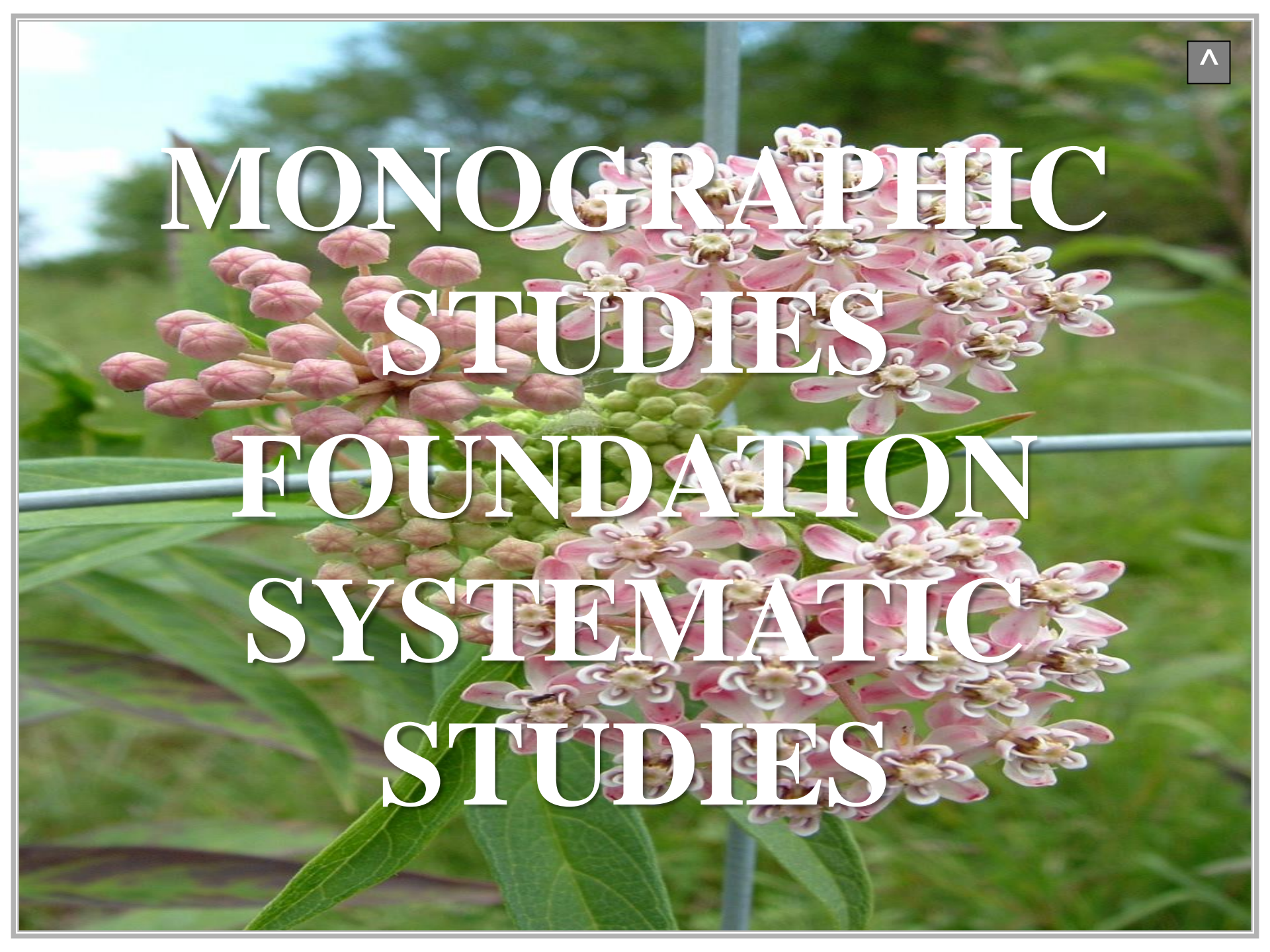
MONOGRAPH

SYNONYMOUS

REVISION



**MONOGRAPHIC
STUDIES
REQUIRED
PhD
PLANT TAXONOMY**

A close-up photograph of a plant stem with several clusters of small, pink, tubular flowers. The flowers are in various stages of bloom, with some fully open and others as buds. The background is a soft-focus green, suggesting a garden or field setting. A thin metal wire is visible horizontally across the middle of the frame.

MONOGRAPHIC
STUDIES
FOUNDATION
SYSTEMATIC
STUDIES

BETA TAXONOMIST

BETA TAXONOMIST

BETA TAXONOMIST



**BOTANIST CONDUCTS
MONOGRAPHIC
STUDIES**

BETA TAXONOMIST



MONOGRAPH STUDY OUTLINE

MONOGRAPHIC STUDY OUTLINE



SELECT PLANT TAXON

MONOGRAPHIC STUDY OUTLINE

MONOGRAPHIC STUDY OUTLINE



SELECT PLANT TAXON
CONDUCT LITERATURE SEARCH

MONOGRAPHIC STUDY
OUTLINE

MONOGRAPHIC STUDY OUTLINE



SELECT PLANT TAXON
CONDUCT LITERATURE SEARCH
CONDUCT HERBARIUM SEARCH

MONOGRAPHIC STUDY OUTLINE

MONOGRAPHIC STUDY

OUTLINE



SELECT PLANT TAXON
CONDUCT LITERATURE SEARCH
CONDUCT HERBARIUM SEARCH
SELECT RESEARCH METHODS

MONOGRAPHIC STUDY

OUTLINE

MONOGRAPHIC STUDY OUTLINE



SELECT PLANT TAXON
CONDUCT LITERATURE SEARCH
CONDUCT HERBARIUM SEARCH
SELECT RESEARCH METHODS
CONDUCT DATA ANALYSIS

MONOGRAPHIC STUDY OUTLINE

MONOGRAPHIC STUDY OUTLINE



SELECT PLANT TAXON
CONDUCT LITERATURE SEARCH
CONDUCT HERBARIUM SEARCH
SELECT RESEARCH METHODS
CONDUCT DATA ANALYSIS
APPLY NOMENCLATURE

MONOGRAPHIC STUDY OUTLINE

MONOGRAPHIC STUDY OUTLINE




SELECT PLANT TAXON
CONDUCT LITERATURE SEARCH
CONDUCT HERBARIUM SEARCH
SELECT RESEARCH METHODS
CONDUCT DATA ANALYSIS
APPLY NOMENCLATURE
PUBLISH MONOGRAPH

MONOGRAPHIC STUDY OUTLINE



SELECT PLANT TAXON



**ANGIOSPERM
MONOGRAPHS
CONDUCTED AT
GENERIC RANK**



**SELECT GENUS
LACKING
MONOGRAPH**

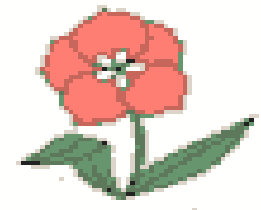


**SELECT GENUS
OUT-DATED
MONOGRAPH**



CLASS MONOGRAPH

Unaopsis

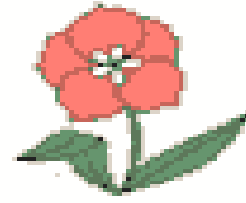


- Unaopsis alpha*
- Unaopsis beta*
- Unaopsis delta*
- Unaopsis epsilon*
- Unaopsis gamma*
- Unaopsis kappa*
- Unaopsis omega*
- Unaopsis sigma*
- Unaopsis theta*
- Unaopsis unaopsis*

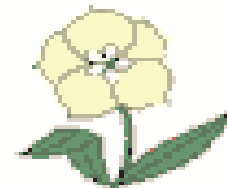
CURRENTLY
ACCEPTED
Unaopsis
SPECIES



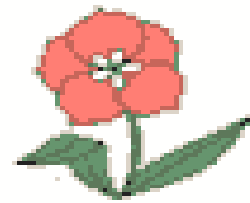
LITERATURE SEARCH



**MUST OBTAIN
ALL
Unaopsis
PUBLISHED
LITERATURE**



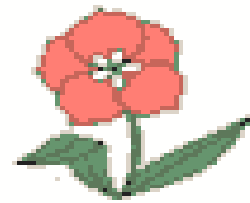
Unaopsis alpha
Unaopsis beta
Unaopsis delta
Unaopsis epsilon
Unaopsis gamma
Unaopsis kappa
Unaopsis omega
Unaopsis sigma
Unaopsis theta
Unaopsis unaopsis



Unaopsis alpha
Unaopsis beta
Unaopsis delta
Unaopsis epsilon
Unaopsis gamma
Unaopsis kappa
Unaopsis omega
Unaopsis sigma
Unaopsis theta
Unaopsis unaopsis

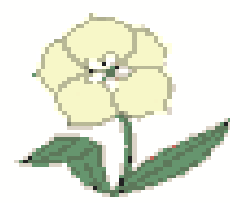
**OBSOLUTELY
ESSENTIAL
Unaopsis
ORIGINAL
DESCRIPTIONS**





- Unaopsis alpha*
- Unaopsis beta*
- Unaopsis delta*
- Unaopsis epsilon*
- Unaopsis gamma*
- Unaopsis kappa*
- Unaopsis omega*
- Unaopsis sigma*
- Unaopsis theta*
- Unaopsis unaopsis*

**MUST OBTAIN
ALL TEN
Unaopsis
ORIGINAL
DESCRIPTIONS**



ORIGINAL DESCRIPTION

ORIGINAL DESCRIPTION



**ORIGINAL
DESCRIPTION**

**BOTANICAL JOURNAL
PUBLICATION**

**ORIGINAL
DESCRIPTION**

**ORIGINAL
DESCRIPTION**



**BOTANICAL JOURNAL
PUBLICATION**

**DESCRIBES
NEW SPECIES**

**ORIGINAL
DESCRIPTION**

Unaopsis sigma Kellogg sp. nov.

A Unaopsis beta spicis femineis angustioribus, perigyniis brevioribus et ascendentioribus, perigyniis (1.7-)1.8-2.0 plo longioribus, rostris quam corporibus acheniorum, stipitibus acheniorum, rostris Acheniorum flexis differt; a Unaopsis delta. Perigyniis paucioribus, laxioribus, longioribus, et (1.9-)2.1-2.6(2.8) plo longioribus, quam latioribus differt; a speciebus imbibes pedunculis spicarum terminalium longioribus differt.

TYPE: Kellogg 2174

U.S.A. Mississippi

Lowndes County, ~1.8 miles west of Mayhew.

Holotype: MICH

Isotype: NY; US

Paratype: Jones 1768 NY; Smith 2345 MO; Edwards 6785 GH

SYSTEMATIC BOTANY

Unaopsis sigma Kellogg sp. nov.

ORIGINAL DESCRIPTION SCIENTIFIC NAME

A *Unaopsis beta* spicis femineis angustioribus, perigyniis brevioribus et ascendentioribus, perigyniis (1.7-)1.8-2.0 plo longioribus, rostris quam corporibus acheniorum, stipitibus acheniorum, rostris Acheniorum flexis differt; a Unaopsis delta. Perigyniis paucioribus, laxioribus, longioribus, et (1.9-)2.1-2.6(2.8) plo longioribus, quam latioribus differt; a speciebus imbibes pedunculis spicarum terminalium longioribus differt.

TYPE: Kellogg 2174

U.S.A. Mississippi

Lowndes County, ~1.8 miles west of Mayhew.

Holotype: MICH

Isotype: NY; US

Paratype: Jones 1768 NY; Smith 2345 MO; Edwards 6785 GH

SYSTEMATIC BOTANY

ORIGINAL DESCRIPTION

Unaopsis sigma Kellogg sp. nov.

LATIN DESCRIPTION

A *Unaopsis* beta spicis femineis angustioribus, perigyniis brevioribus et ascendentioribus, perigyniis (1.7-)1.8-2.0 plo longioribus, rostris quam corporibus acheniorum, stipitibus acheniorum, rostris Acheniorum flexis differt; a Unaopsis delta. Perigyniis paucioribus, laxioribus, longioribus, et (1.9-)2.1-2.6(2.8) plo longioribus, quam latioribus differt; a speciebus imbibes pedunculis spicarum terminalium longioribus differt.

TYPE: Kellogg 2174

U.S.A. Mississippi

Lowndes County, ~1.8 miles west of Mayhew.

Holotype: MICH

Isotype: NY; US

Paratype: Jones 1768 NY; Smith 2345 MO; Edwards 6785 GH

SYSTEMATIC BOTANY

ORIGINAL DESCRIPTION

Unaopsis sigma Kellogg sp. nov.

DESIGNATED TYPE SPECIMEN

A *Unaopsis* beta spicis femineis angustioribus, perigyniis brevioribus et ascendentioribus, perigyniis (1.7-)1.8-2.0 plo longioribus, rostris quam corporibus acheniorum, stipitibus acheniorum, rostris Acheniorum flexis differt; a Unaopsis delta. Perigyniis paucioribus, laxioribus, longioribus, et (1.9-)2.1-2.6(2.8) plo longioribus, quam latioribus differt; a speciebus imbibes pedunculis spicarum terminalium longioribus differt.

TYPE: Kellogg 2174

U.S.A. Mississippi

Lowndes County, ~1.8 miles west of Mayhew.

Holotype: MICH

Isotype: NY; US

Paratype: Jones 1768 NY; Smith 2345 MO; Edwards 6785 GH



Unaopsis sigma Kellogg sp. nov.

LOCATION TYPE SPECIMEN

A *Unaopsis* beta spicis femineis angustioribus, perigyniis brevioribus et ascendentioribus, perigyniis (1.7-)1.8-2.0 plo longioribus, rostris quam corporibus acheniorum, stipitibus acheniorum, rostris Acheniorum flexis differt; a Unaopsis delta. Perigyniis paucioribus, laxioribus, longioribus, et (1.9-)2.1-2.6(2.8) plo longioribus, quam latioribus differt; a speciebus imbibes pedunculis spicarum terminalium longioribus differt.

TYPE: Kellogg 2174

U.S.A. Mississippi

Lowndes County, ~1.8 miles west of Mayhew.

Holotype: MICH

Isotype: NY; US

Paratype: Jones 1768 NY; Smith 2345 MO; Edwards 6785 GH

TYPE SPECIMEN

**TYPE
SPECIMEN**



**TYPE
SPECIMEN**

**RELEVANT
NOMENCLATURE
SPECIMEN**

**TYPE
SPECIMEN**



**TYPE
SPECIMEN**

NAME

BEARING SPECIMEN

**PLANT NAME PERMANENTLY
ATTACHED TO THE SPECIMEN**

**TYPE
SPECIMEN**



**TYPE
SPECIMEN**

**VITAL TO
NOMENCLATURE**

**TYPE
SPECIMEN**



**RELEVANT
NOMENCLATURE
SPECIMEN**

TYPE SPECIMEN: IMPORTANT



**RELEVANT
NOMENCLATURE
SPECIMEN**

TYPE SPECIMEN: IMPORTANT



**NAME
BEARING
SPECIMEN**

TYPE SPECIMEN: IMPORTANT



**NAME
BEARING
SPECIMEN**

TYPE SPECIMEN: IMPORTANT



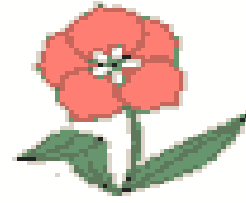
**VITAL
TO
NOMENCLATURE**

TYPE SPECIMEN: IMPORTANT



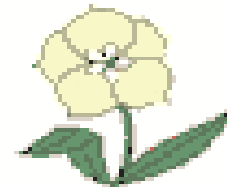
**VITAL
TO
NOMENCLATURE**

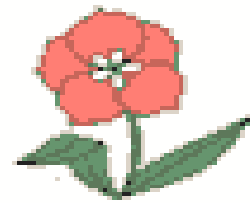
TYPE SPECIMEN: IMPORTANT



Unaopsis alpha
Unaopsis beta
Unaopsis delta
Unaopsis epsilon
Unaopsis gamma
Unaopsis kappa
Unaopsis omega
Unaopsis sigma
Unaopsis theta
Unaopsis unaopsis

**MUST LOCATE
ALL TEN
Unaopsis
TYPE
SPECIMENS**





- Unaopsis alpha*
- Unaopsis beta*
- Unaopsis delta*
- Unaopsis epsilon*
- Unaopsis gamma*
- Unaopsis kappa*
- Unaopsis omega*
- Unaopsis sigma*
- Unaopsis theta*
- Unaopsis unaopsis*

**MUST OBTAIN
ALL TEN
Unaopsis
ORIGINAL
DESCRIPTIONS**





LOCATING ORIGINAL DESCRIPTIONS

NOMENCLATURE INDEX

NOMENCLATURE

INDEX

NOMENCLATURE INDEX



**PROVIDES
ORIGINAL DESCRIPTION
CITATION**

**NOMENCLATURE
INDEC**

NOMENCLATURE

I

INDEX

INTERNATIONAL

PLANT NAME INDEX

INPI

NOMENCLATURE

INDEC

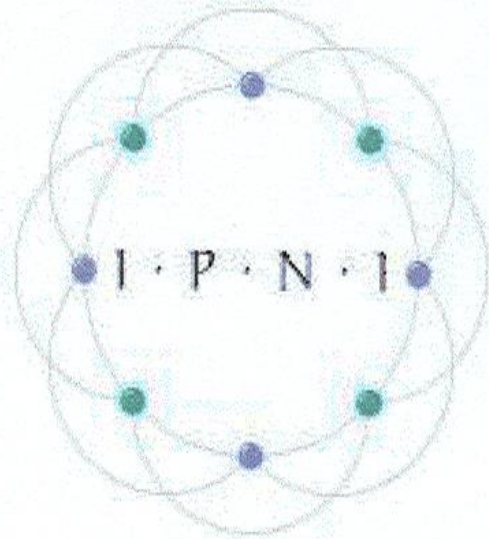
**NOMENCLATURE
INDEX**



**INTERNATIONAL
PLANT NAME INDEX**

INTERNET SERVICE

**NOMENCLATURE
INDEX**



THE INTERNATIONAL PLANT NAME INDEX

-  [Search Plant Names](#)
-  [Search Authors](#)
-  [Search Publications](#)

IPNI Overview

- [About the Index](#)
- [Understanding the data](#)
- [FAQs](#)
- [Mission Statement](#)

Search the data

- [Plant Names](#)
- [Authors](#)
- [Publications](#)

Contributions

- [How can you help?](#)

About IPNI

The International Plant Names Index (IPNI) is a database of the names and associated basic bibliographical details of all seed plants. Its goal is to eliminate the need for repeated reference to primary sources for basic bibliographic information about plant names. The data are freely available and are gradually being standardized and checked. IPNI will be a dynamic resource, depending on direct contributions by all members of the botanical community.

IPNI is the product of a collaboration between [The Royal Botanic Gardens, Kew](#), [The Harvard University Herbaria](#), and the [Australian National Herbarium](#)

TYPE IN PLANT NAME

Search terms

Family Name

Infrafamilial Name

Genus Name

Infrageneric Name

Species epithet

Infraspecific epithet

Author Abbreviation

Publication Title

Show Ranks

Output Format

Look for Authors in:

taxon name authors

basionym authors

TYPE IN PLANT NAME



Search terms

Family Name

Infrafamilial Name

Genus Name

Infrageneric Name

Species epithet

Infraspecific epithet

Author Abbreviation

Publication Title

Show Ranks

Output Format

Look for Authors in:

taxon name authors

basionym authors



TYPE IN PLANT NAME

Search terms

Family Name	<input type="text"/>	Infrafamilial Name	<input type="text"/>
Genus Name	<input type="text" value="Unaopsis"/>	Infrageneric Name	<input type="text"/>
Species epithet	<input type="text" value="sigma"/>	Infraspecific epithet	<input type="text"/>
Author Abbreviation	<input type="text"/>	Publication Title	<input type="text" value="Rhodora
pg: 450 vol: 23 1998"/>
Show Ranks	<input type="text" value="All"/>	Output Format	<input type="text" value="Normal"/>
Look for Authors in:	<input checked="" type="checkbox"/> taxon name authors		<input checked="" type="checkbox"/> basionym authors



RHODORA

The Journal of the
New England Botanical Club

CONTENTS

Climate change and the development of coastal plain disjunctions in the central Great Lakes region. <i>Stephen T. Jackson and Darren K. Singer</i>	101
Appalachian quillwort (<i>Isoetes appalachiana</i> , sp. nov.; Isoetaceae), a new pteridophyte from the eastern United States. <i>Daniel F. Branton and Donald M. Britton</i>	118
Propagation and reintroduction of the endangered hemiparasite <i>Schwalbea americana</i> (Scrophulariaceae). <i>Elizabeth M. Obee and Robert J. Carlick</i>	134
Chromosome numbers of new <i>Ulmus</i> (elm) taxa introduced from China. <i>Frank S. Santamour, Jr. and George H. Ware</i>	148
Natural hybridization in the genus <i>Cirsium</i> : <i>C. altissimum</i> × <i>C. discolor</i> —cytological and morphological evidence. <i>Simon Dabrydeen</i>	152
Tall wheatgrass, <i>Elymus elongatus</i> subsp. <i>ponticus</i> , in Nova Scotia. <i>S. J. Darbyshire</i>	161
RECOLLECTIONS	
Recollections of botanist George Jones Goodman. <i>Cheryl A. Lawson</i>	166
BOOK REVIEWS	
Catkin-Bearing Plants of British Columbia	182
Wild Orchids of the Northeastern United States: A Field Guide	185
NEBC MEETING NEWS	188
ANNOUNCEMENT	
1997 Jesse M. Greenman Award	191
Information for Contributors	192
NEBC Membership Form	194
NEBC Officers and Council Members	inside back cover

RHODORA: Vol. 23 1998.





Unaopsis sigma Kellogg sp. nov. **ORIGINAL DESCRIPTION**

A *Unaopsis* beta spicis femineis angustioribus, perigyniis brevioribus et ascendentioribus, perigyniis (1.7-)1.8-2.0 plo longioribus, rostris quam corporibus acheniorum, stipitibus acheniorum, rostris Acheniorum flexis differt; a Unaopsis delta. Perigyniis paucioribus, laxioribus, longioribus, et (1.9-)2.1-2.6(2.8) plo longioribus, quam latioribus differt; a speciebus imbibes pedunculis spicarum terminalium longioribus differt.

TYPE: Kellogg 2174

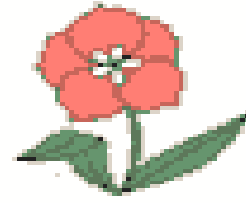
U.S.A. Mississippi

Lowndes County, ~1.8 miles west of Mayhew.

Holotype: MICH

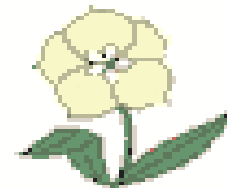
Isotype: NY; US

Paratype: Jones 1768 NY; Smith 2345 MO; Edwards 6785 GH



- Unaopsis alpha*
- Unaopsis beta*
- Unaopsis delta*
- Unaopsis epsilon*
- Unaopsis gamma*
- Unaopsis kappa*
- Unaopsis omega*
- Unaopsis sigma*
- Unaopsis theta*
- Unaopsis unaopsis*

**MUST OBTAIN
ALL TEN
Unaopsis
ORIGINAL
DESCRIPTIONS**





HERBARIUM SEARCH



**TYPE
SPECIMEN
VS
GENERAL
SPECIMEN**

TYPE SPECIMEN

**TYPE
SPECIMEN**



**TYPE
SPECIMEN**

**RELEVANT
NOMENCLATURE
SPECIMEN**

**TYPE
SPECIMEN**



**TYPE
SPECIMEN**

NAME

BEARING SPECIMEN

**PLANT NAME PERMANENTLY
ATTACHED TO THE SPECIMEN**

**TYPE
SPECIMEN**



**TYPE
SPECIMEN**

**VITAL TO
NOMENCLATURE**

**TYPE
SPECIMEN**



**RELEVENT
NOMENCLATUE
SPECIMEN**

TYPE SPECIMEN



**RELEVENT
NOMENCLATUE
SPECIMEN**

TYPE SPECIMEN



**NAME
BEARING
SPECIMEN**

TYPE SPECIMEN



**NAME
BEARING
SPECIMEN**

TYPE SPECIMEN



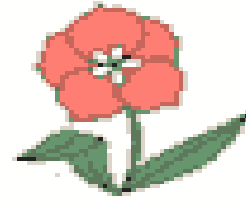
**VITAL
TO
NOMENCLATURE**

TYPE SPECIMEN



**VITAL
TO
NOMENCLATURE**

TYPE SPECIMEN



Unaopsis alpha
Unaopsis beta
Unaopsis delta
Unaopsis epsilon
Unaopsis gamma
Unaopsis kappa
Unaopsis omega
Unaopsis sigma
Unaopsis theta
Unaopsis unaopsis

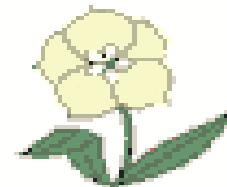
MUST BARROW

ALL

Unaopsis

TYPE

SPECIMENS



GENERAL SPECIMEN

GENERAL SPECIMEN



GENERAL SPECIMEN

**NON-RELEVANT
NOMENCLATURE
SPECIMEN**

GENERAL SPECIMEN



GENERAL SPECIMEN

**NON-NAME
BEARING SPECIMEN**

**NO PLANT NAME PERMANENTLY
ATTACHED TO THE SPECIMEN**

GENERAL SPECIMEN



GENERAL SPECIMEN

**NOT VITAL TO
NOMENCLATURE**

GENERAL SPECIMEN



**NON-RELEVANT
NOMENCLATUE
SPECIMEN**

GENERAL SPECIMEN



**NON-RELEVANT
NOMENCLATUE
SPECIMEN**

GENERAL SPECIMEN



**NON-NAME
BEARING
SPECIMEN**

GENERAL SPECIMEN



**NON-NAME
BEARING
SPECIMEN**

GENERAL SPECIMEN



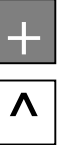
**NOT VITAL
TO
NOMENCLATURE**

GENERAL SPECIMEN



**NOT VITAL
TO
NOMENCLATURE**

GENERAL SPECIMEN





**MUST BARROW
AS MANY
AS POSSIBLE**

GENERAL SPECIMEN



**MUST BARROW
AS MANY
AS POSSIBLE**

GENERAL SPECIMEN

WORLD MAJOR HERBARIA



Muséum National d'Histoire Naturelle	Paris, France	8,877,300
Royal Botanic Gardens	Kew, United Kingdom	6,000,000
Komarov Botanical Institute	St. Petersburg, Russia	5,770,000
Swedish Museum of Natural History	Stockholm, Sweden	5,600,000
New York Botanical Garden	New York, United States	5,300,000
Natural History Museum	London, United Kingdom	5,200,000
Conservatoire et Jardin Botaniques	Geneva, Switzerland	5,000,000
Harvard University	Cambridge, MA, United States	4,858,000
Smithsonian Institution	Washington, DC, United States	4,368,000
Institute de Botanique	Montpellier, France	4,000,000
Université de Lyon	Villeurbane, France	3,800,000
Naturhistorisches Museum	Vienna, Austria	3,750,000
Herbarium, Missouri Botanical Garden	St. Louis, MO, United States	3,700,000
Universitatis Florentinae,	Museo Botanico Firenze, Italy	3,600,000
Friedrich-Schiller-Universität	Jena, Germany	3,000,000
Rijksherbarium	Leiden, Netherlands	3,000,000



**MUST BARROW
FROM SOME REGIONAL
HERBARIA**

GENERAL SPECIMEN



1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
21	21
22	22
23	23
24	24
25	25
26	26
27	27
28	28
29	29
30	30
31	31
32	32
33	33
34	34
35	35
36	36
37	37
38	38
39	39
40	40
41	41
42	42
43	43
44	44
45	45
46	46
47	47
48	48
49	49
50	50



**MUST BARROW
FROM SOME REGIONAL
HERBARIA**

GENERAL SPECIMEN



REGIONAL HERBARIA

Herbarium Code	Institution	Location
APSC	Austin Peay State University	U.S.A. Tennessee. CLARKSVILLE.
ETSU	East Tennessee State University	U.S.A. Tennessee. JOHNSON CITY.
GSMNP	Great Smoky Mountains National Park	U.S.A. Tennessee. GATLINBURG.
HTTU	Tennessee Technological University	U.S.A. Tennessee. COOKEVILLE.
MEM	University of Memphis	U.S.A. Tennessee. MEMPHIS.
MTSU	Middle Tennessee State University	U.S.A. Tennessee. MURFREESBORO.
SWMT	Rhodes College	U.S.A. Tennessee. MEMPHIS.
TENN	University of Tennessee	U.S.A. Tennessee. KNOXVILLE.
UCHT	University of Tennessee, Chattanooga	U.S.A. Tennessee. CHATTANOOGA.
UOS	University of the South	U.S.A. Tennessee. SEWANEE.
VDB	Vanderbilt University	U.S.A. Tennessee. NASHVILLE.

HERBARIUM INDEX

**HERBARIUM
INDEX**