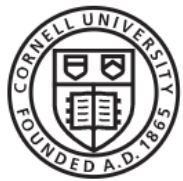


CAPSTONE PROJECT 2021

Deirdre S. Hickey MPS Candidate, Dec 2021

Dr. Jeffrey A. Perry, Advisor

Ethan Knickerbocker, Student (Tester), SUNY Cobleskill



Cornell University

Landscape Plant ID – 2 CR

LANDSCAPE

APPRENTICESHIP

&

LANDSCAPE

DEVELOPMENT

ONLINE

CERTIFICATE DEGREE



SUNY

Cobleskill

GROW • SUSTAIN • RENEW

History of process:

Spring 2020 - Plant Science Department Chair, Timothy Marten asked me, as instructor of Woody Plant Material ID at the time, to create an online Landscape Plant ID course. The request came as a result of research on Tim's part on a concept he has been developing.



Tim also asked me to consider getting a masters.

I applied to Cornell CALS and was applying to University of Nebraska, when Cornell's answer came.



The concept for this capstone was discussed with Dr. Marvin Pritts, Director of Masters of Professional Studies (MPS) and Tara Reed, Events Coordinator MPS at Cornell University, CALS. (College of Agriculture and Life Sciences) at my entry interview. (I took the liberty of using photos from Cornell's website here.)







Home > Dashboard

Customize this page

* Course overview

⌵ All (except removed from view)

📄 Course name

📄 Summary



Miscellaneous



Landscape Plants ID - MPS Project



Fall 2021



ORHT-121-20749-Woody Plant Materials (C) (Fall 2021)



Summer 2021

Landscape Management (Summer 2021)

Hidden from students



Navigation

Home

🏠 Dashboard

▸ Site pages

▾ My courses

▸ ORHT-121-20749-202109

▸ Employee Internal Control Training (2021/22)

▸ MPS Project

▸ Fiscal Affairs and Strategic Planning (FASP) Commi...

▸ Middle States

▸ CC-111

▸ Faculty Documentation

▸ Do the Right Thing (2020)

▸ Online Education Workshops

▸ RegSupport21

■ More...

Student Help





Home > My courses > MPS Project



Announcements



Syllabus



Plant List



Welcome to Plant ID

ASSIGNMENTS



#1 Visit a wholesale nursery



Final Lab Project

EXAMS

All exams are cumulative. The language used in the exams, to test your ability to remember that language for the 'field', will be used to ask you questions.

EX. What is the term for the distal end of the leaf.

In another question you may be asked: The shape of the apex is usually distinct from the shape of the base. Which term is the apex, which is the base?: with choices of terms for apex and base.

Keep up with the terms throughout the semester, it will help you once you find that job or in continuation of the one you have!



Lecture Exam #1

Hidden from students

Lecture Exam #2

Turn editing on



Student Help



Administration

▼ Course administration

Edit settings

▸ Users

Filters

▸ Reports

Gradebook setup

▸ Badges

Backup

Restore

Import


Reset

▸ Question bank

Repositories

Repositories

NOMENCLATURE

 Rules for nomenclature

 what to expect in writing botanical names for this class

MORPHOLOGY

 Morphology

 Morphology - Conifers - Evergreens

 Morphology Floral

 Morphology Inflorescences

 Morphology Leaf Bases

 Morphology Leaf Margins

 Morphology Leaf Shapes

 Morphology Leaf Simple

 Morphology Leaf Compound

 Morphology Stem






 Morphology PowerPoint PDF

SOIL

 LECTURE - Plant Forms - Soil



























TREES

these links work when the student is signed into the Cobleskill network. Ethan was kind in testing these links from the student view for me. Once it was realized that they work, I incorporated some into my Woody Plant ID course for their final.

-  View Scheduled
-  View Sent Messages
-  My Signatures
-  Alternate Emails
-  Configuration

Navigation

Home

-  Dashboard
-  Site pages
-  My courses
 -  ORHT-121-20749-202109
 -  Employee Internal Control Training (2021/22)
 -  MPS Project
 -  Participants
 -  Badges
 -  Competencies
 -  Grades
 -  General
 -  ASSIGNMENTS
 -  EXAMS
 -  NOMENCLATURE
 -  MORPHOLOGY
 -  SOIL
 -  TREES
 -  SHRUBS
 -  HERBACEOUS PERENNIALS
 -  ANNUALS
 -  BULBS
 -  Topic 11
 -  Topic 12
 -  Fiscal Affairs and Strategic Planning (FASP) Commi...
 -  Middle States
 -  CC-111

OneDrive

Search

Current folder

Hickey, Deirdre S

+ New

Upload

Share

Copy link

Sync

Download

Automate

Sort

My files

Recent

Shared

Recycle bin

Quick access

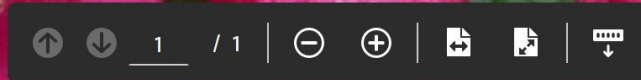
Sites help you work on projects with your team and share information from anywhere on any device. Create or follow sites to see them here.

My files

Morphology floral

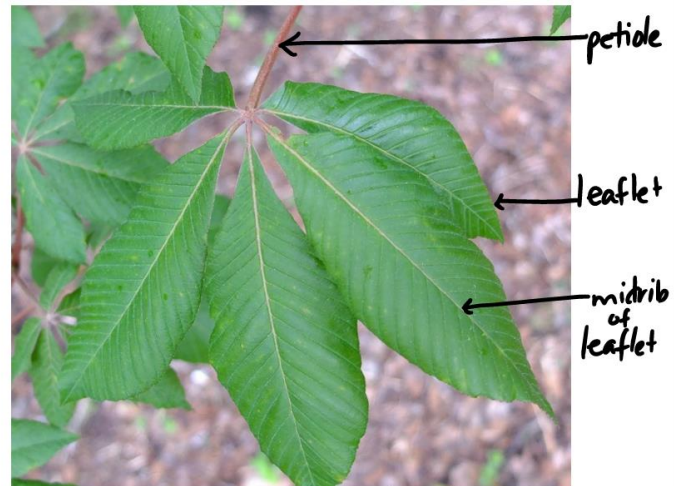
	Name	Modified	Modified By	File size	Sharing
	Morph_Euon_sachalinensis_bloom.pdf	December 2	Hickey, Deirdre S	489 KB	Shared
	Morph_flower_buds.pdf	November 3	Hickey, Deirdre S	394 KB	Shared
	Morph_flwr_malus_dog.pdf	December 2	Hickey, Deirdre S	320 KB	Shared
	Morph_flwr_weig_ID.pdf	December 2	Hickey, Deirdre S	314 KB	Shared

the first link highlighted takes you to my OneDrive, once there, the student has the option of perusing several links taking them to the next level. Photos, that I took to highlight certain aspects of plant material in helping with identification qualities, that are hand labeled.



the ovary
is not visible
here - it is
in the base

LEAF TYPE



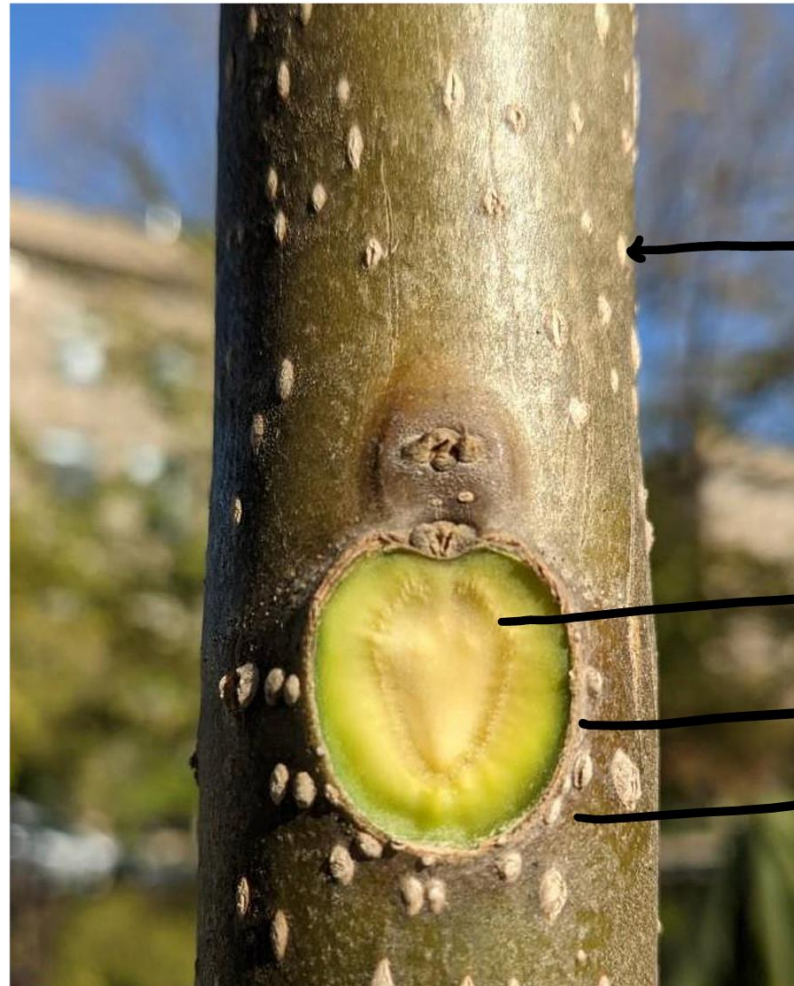
compound palmate



radial point of attachment

Aesculus parviflora

STEM ID



lenticel

vascular bundle
scar

leaf scar

node

Some photos turned out simply perfect!



thorn .
protrusion
of modified
stem, sharp,
pointed,
used by
plant for
protection



bramble .
protrusions of
modified leaves
on a stem, sharp,
pointed, used by
plant for protection

SOIL



LECTURE - Plant Forms - Soil

TREES

SHRUBS

HERBACEOUS PERENNIALS



Herbaceous Perennials ID photos

ANNUALS



ANNUAL ID Photos

BULBS

I have a few lectures prepared already, enhanced to assist with plant ID at every level. Am I finished with any of these? No. Are we ever done? Don't we always find something more, or a bit more in detail, to add. I would like to think of this as a work in progress.

▶ SHRUBS

▶ HERBACEOUS PERENNIALS

▶ ANNUALS

▶ BULBS

▶ Topic 11

▶ Topic 12

▶ Fiscal Affairs and Strategic Planning (FASP) Committee

▶ Middle States

▶ CC-111

▶ Faculty Documentation

▶ Do the Right Thing (2011)

▶ Online Education Workgroup

▶ RegSupport21

■ More...

 Accessibility report

PowerPoint Presentation 3 / 57 81%

MORPHOLOGY
trees and shrubs
parts can be used for some herbaceous perennials and shrubs
LEAVES, FLOWERS, FRUIT, SEEDS, BARK, TWIG, STEM

1

MORPHOLOGY
definition:
a branch of biology studying the form and structure of plants, including their specific structural features, internal organization along with the form and structure of internal parts

2

LEAVES: SIMPLE
LEAF BLADE
PETIOLE
APEX
MARGIN
MIDRIB
VEIN
BASE

3

LEAVES: COMPOUND
LEAF BLADE
PETIOLE
RACHIS
LEAFLET
AXILLARY BRANCH
TERMINAL BRANCH

4

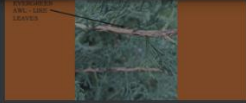
LEAVES: COMPOUND
LEAF BLADE
PETIOLE
RACHIS
LEAFLET
AXILLARY BRANCH
TERMINAL BRANCH

5

MORPHOLOGY
definition:
a branch of biology studying the form and structure of plants, including their specific structural features, internal organization along with the form and structure of internal parts

LEAVES: SIMPLE
APEX

My idea was to utilize different photos in every aspect of these presentations. Always presenting a new leaf, flower, attachment point, stem, whatever it may be. That is how it is outside. Real life learning online, in your room, at your house, can you go outside and find any of these plants?



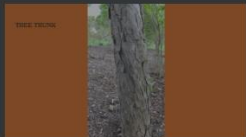
29



30



31



32



33



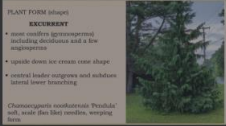
34

simple leaf: single leaf blade able to produce chlorophyll through photosynthesis, attached singly at a node



compound leaf: three or more leaflets attached to a petiole by a rachis, three types of compound leaves!





3



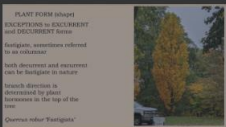
4



5



6



7



8



PLANT
FORM
(shape)

DECURRENT

- begin life as
excurrent
and slowly
become
decurrent

Fagus sylvatica

European
Beech

PLANT FORM (shape)

EXCEPTIONS to EXCURRENT



Again,
using my
own
photos, I
am able to
show the
immensity
of a plant,
this being
an
important
landscape
plant. If
you look
in the
bottom
right, you
will see a
hedge, it's
5' tall.

Some of the photos are from my own job sites, others are from the Cobleskill campus.

This area is in the sunken garden, part of our conifer collection. It is located in front of CANR, the Center for Agriculture and Natural Resources.



PLANT FORM (shape)

EXCEPTIONS to
EXCURRENT and
DECURRENT forms

weeping, prostrate

Juniperus procumbens
'Nana'

Nana Horizontal Juniper

HERBACEOUS PERENNIALS

an herbaceous plant that persists for three or more growing seasons underground by its root system, even though its above ground portion dies back to the ground

biennials persist for two growing seasons reproducing in the second season

proper care will have these perennials lasting for years, multiplying through root systems or by producing seed

1



2



3



4



HERBACEOUS PERENNIALS

an herbaceous plant that persists for three or more growing seasons underground by its root system, even though its above ground portion dies back to the ground

biennials persist for two growing seasons reproducing in the second season

proper care will have these perennials lasting for years, multiplying through root systems or by producing seed

There are Powerpoints dedicated solely to each plant group that will be presented, some of the photos coming from my garden. Trees, shrubs, herbaceous perennials, annuals (Zone 3 – 6) and bulbs.

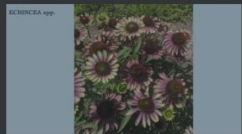
HERBACEOUS PERENNIALS

are herbaceous plants that persist for three or more growing seasons underground for the root system, even though its above ground portion dies back to the ground.
 biennial plants for two growing seasons reproducing in the second season.
 perennials can still have these perennials lasting for years, multiplying through root systems or by producing seed.

1



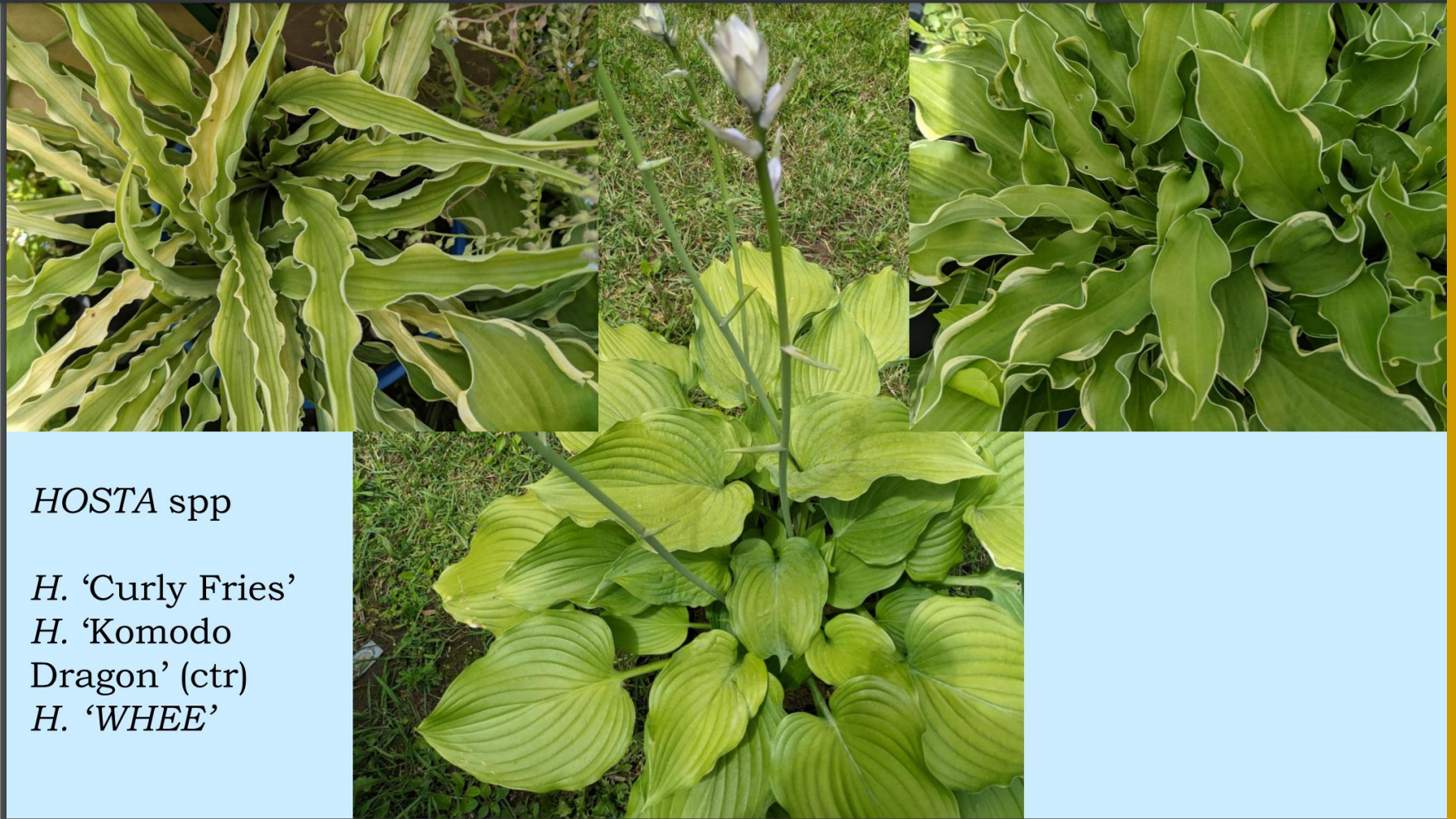
2



3



4



HOSTA spp

H. 'Curly Fries'

H. 'Komodo Dragon' (ctr)

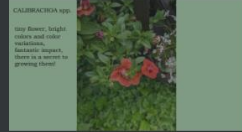
H. 'WHEE'

All plant material presented is properly labeled with botanical and common (regional) names. Specific requirements for the needs of each plant will be presented and discussed. Nicknames given to plants by landscapers will also be addressed.

ANNUALS

herbaceous plants that grow from seed to seed in one growing season
continual flowering with proper care: water, fertilization and pruning
intersperse in the garden for color all season

1



2



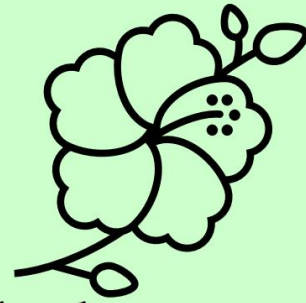
3



4



5



ANNUALS

herbaceous plants that grow from seed to seed in one growing season

continual flowering with proper care: water, fertilization and pruning

intersperse in the garden for color all season

CALIBRACHOA spp.



Annuals, a difficult group at best, it will include some tropicals used in creation of planters for certain applications.



2



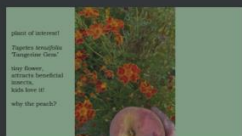
3



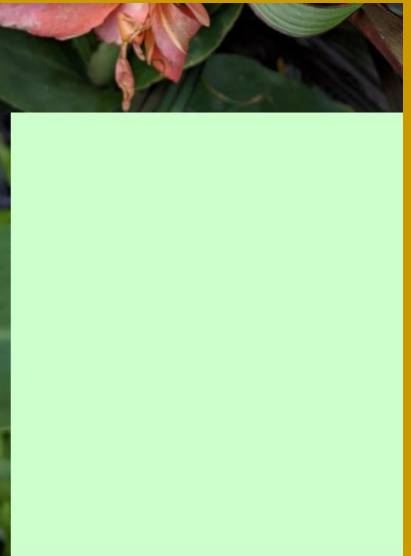
4



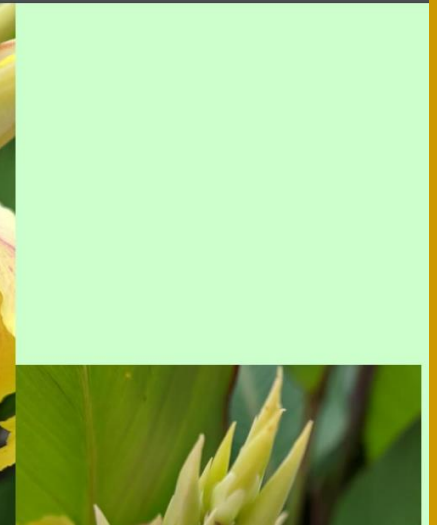
5



6



CANNA hybrids



Some plants cross over from annual to corms, tubers and bulbs....plants are fascinating....we should tell more people!

[Home](#) > [My courses](#) > [MPS Project](#) > [Grades](#) > [Grade administration](#) > [Setup](#) > [Gradebook setup](#)

Gradebook setup

Gradebook setup

Name	Weights?	Max grade	Actions	Select
Landscapes Plants ID - MPS Project		-	Edit	<input type="checkbox"/> All
Course total		300.00	Edit	
EXAMS	<input type="checkbox"/> 33.333	-	Edit	<input type="checkbox"/> EXAMS
EXAMS total Mean of grades.		100.00	Edit	
Lab practicum		100.00	Edit	<input type="checkbox"/>
Lecture Exam #1		100.00	Edit	<input type="checkbox"/>
Lecture Exam #2		100.00	Edit	<input type="checkbox"/>
Lecture Exam #3		100.00	Edit	<input type="checkbox"/>
ASSIGNMENTS	<input type="checkbox"/> 33.333	-	Edit	<input type="checkbox"/> ASSIGNMENTS
ASSIGNMENTS total Mean of grades.		100.00	Edit	
Final Lab Project		100.00	Edit	<input type="checkbox"/>
#1 Visit a wholesale nursery		100.00	Edit	<input type="checkbox"/>
LAB QUIZZES - 5	<input type="checkbox"/> 33.333	-	Edit	<input type="checkbox"/> LAB QUIZZES - 5
LAB QUIZZES - 5 total Mean of grades.		100.00	Edit	

Student Help



Administration

Grade administration

- [Grader report](#)
- [Grade history](#)
- [Outcomes report](#)
- [Overview report](#)
- [Single view](#)
- [User report](#)
- Setup
 - [Gradebook setup](#)
 - [Course grade settings](#)
 - [Preferences: Grader report](#)
- Import
- Export
- Letters
- Scales

The gradebook in Moodle is easy to use. An instructor can add to any of the areas they create. More assignments will be added, along with some of the grades, but most of the grades will autofill as the program is online. The student has the capacity for keeping easy track of their grade through the semester.



Thank you for the opportunity to present my Masters of Professional Studies in Integrative Plant Sciences Capstone Project to you from Cornell School of Agriculture and Life Sciences.

If you have any questions, suggestions, or editing please feel free to contact me through the following:

cell 585-278-4678

dh737@cornell.edu

hickeyDS@cobleskill.edu

hickeyds56@yahoo.com

I can also be found on LinkedIn or Instagram (irish56biker)