Flower Power—The Application of the Art and Science of the Beauty and Perfection of Flowers

Professor Heiner Lieth

jhlieth@ucdavis.edu

Plant Sciences

UCDavis

How this course came about

- In 2007 I was engaged by the USDA FAS (Foreign Ag Service) to do a weeklong workshop on flower production in Montenegro.

Do you know:

Where that is?

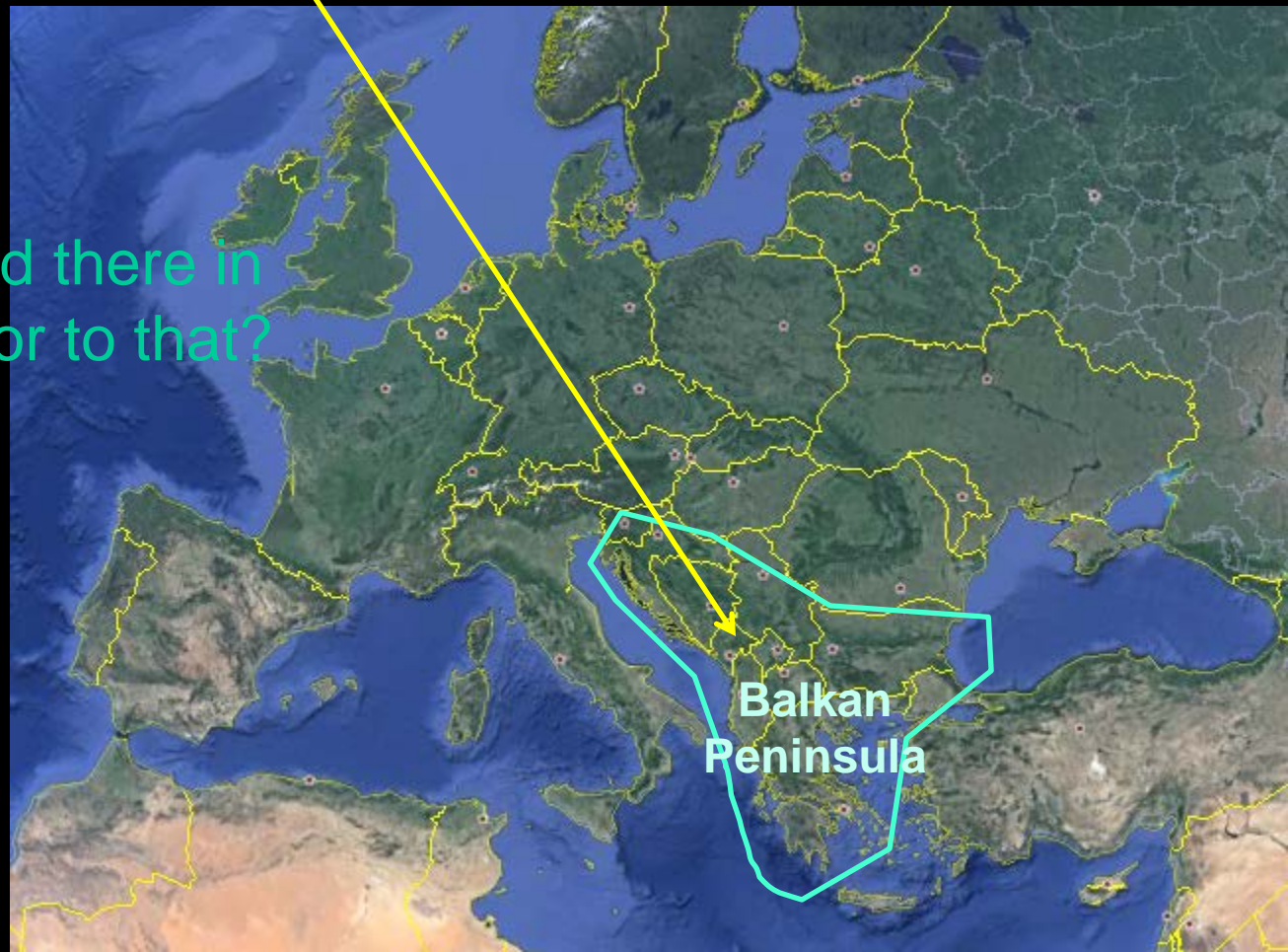What happened there in the decade prior to that?

How this course came about

- In 2007 I was engaged by the USDA FAS (Foreign Ag Service) to do a weeklong workshop on flower production in Montenegro.
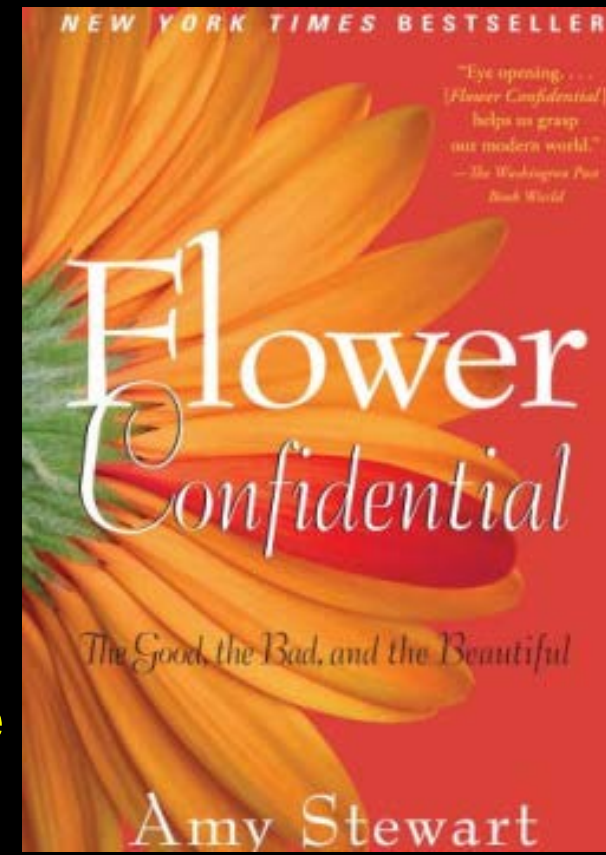
Do you know:

Where that is?

What happened there in the decade prior to that?

Balkan
Peninsula

How this course came about

- In 2007 I was engaged by the USDA FAS (Foreign Ag Service) to do a weeklong workshop on flower production in Montenegro.
  - Mission: build agricultural capacity to help maintain peace in the Balkans.

- As I left for the airport my wife gave me a book entitled "Flower Confidential" suggesting that it might be interesting light reading for me.

- When I started reading the book, I had a revelation.
  - I knew all the main characters in the book!

NEW YORK TIMES BESTSELLER

"Eye opening. . . . [Flower Confidential] helps us grasp our modern world."
— The Washington Post Book World

Flower Confidential

The Good, the Bad, and the Beautiful

Amy Stewart

INTRODUCTION

...uro.

...ain

W hat's the first thing a person does when you hand them flowers?" Bob Otsuka, general manager of the San Francisco Flower Mart, asked me. To answer his own question, he pantomimed the gesture people make, bringing his hands to his face and breathing deeply.

"They smell them," he said.

Flow...

...for me.

- When I started reading the book, I had a revelation.
  - I knew all the main characters in the book!

ES BESTSELLER

"Eye opening. . . . {Flower Confidential} helps us grasp our modern world."
—The Washington Post Book World

...wer
Confidential

The Good, the Bad, and the Beautiful

Amy Stewart

W hat's the first thing a pe
flowers?" Bob Otsuka, g
cisco Flower Mart, asked me. To
tomimed the gesture people mal
and breathing deeply.

"They smell them," he said.

for me.

- When I started rea
  I had a revelation.
  - I knew all the main characters in the book!

Flowe

Amy Stewart

W hat
flo
cisco Flowe
tomimed th
and breathi
"They sr
for
Flowe
Wh
I ha
I
b

I sniffed the air, trying to catch the fragrance of rose or lily. Nothing. Sixty vendors sell cut flowers and plants out of this warehouse off Market Street, and as Bob and I walked the concrete floor a little after 5 a.m. neither one of us could find a blossom with a scent.

"These flowers have all been bred for the industry," Bob said. "They're selecting for color and size, and most of all for durability. You make some trade-offs when you do that. One of the things these flowers lose is scent."

"But you know what?" he said as we continued down the hall past carts loaded with buckets of hydrangeas and sunflowers. "People still want to believe that flowers smell good. I've seen somebody put their face right into a bunch of 'Leonides' and say, 'Oh, they smell wonderful.' But I know that rose. It's got gold petals with coppery edges — you know the one I mean? It was bred for fall weddings. And it doesn't have any fragrance at all."

e air, trying to catch the fragrance of rose or lily.

vendors sell cut flowers and plants out of this ware-

ket Street, and as Bob and I walked the concrete

ter 5 a.m. neither one of us could find a blossom

ers have all been bred for the industry," Bob said.

ng for color and size, and most of all for durability.

e trade-offs when you do that. One of the things

their face right into a bunch of 'Leonides' and say,

'Oh, they smell wonderful.' But I know that rose. It's got gold pet-

als with coppery edges — you know the one I mean? It was bred

for fall weddings. And it doesn't have any fragrance at all."

Correct spelling: 'Leonidas'

Flower Confidential

- By Amy Stewart

- An exposé of the flower industry
  - Where flowers come from (a mystery to most)
  - How they are distributed
  - Genetics and production of flower, internationally

- It seemed like the perfect framework for a freshman seminar course.

- I figured it would be really easy since I really knew all the info, and the book could provide a nice course-outline.

Flower Power origin

- So on the flight back from Montenegro I sketched out the entire course

- Back in Davis, when I proposed it as Freshman Seminar, the administration liked the idea.

First iteration as UCDavis Freshman Seminar

By design: small course; seminar-style

Max enrollment was set at: 15 students

When I arrive for the first class meeting, there are 40 students there….

10 on the waiting list….

the rest waiting to get on the waiting list…

And: it since it was not in the catalog, it took a lot of detective work for each of them to find the course!

(It was a sign of things to come).

Subsequent offerings – always a lot of interest

First turned course into a "Special topics course".

Then into regular UCDavis course

I have explicitly designed the course to give students what they want and need.

- They "need": an easy science course, one or two units

- They "want": interesting material, not stressful, useful,..

- For such a course: they prefer Pass/No-pass grading

- Desired: one block per week (minimal investment); no conflict with their required courses.

Current structure:

Now a regular UCDavis course (PLS 006)

Designed as survey of floriculture

Last year we did national research project…

2 units, Pass/No-pass grading

10 weeks, one late afternoon meeting per week

Comfortable lecture hall with comfortable seating.

SYLLABUS can be found at Smartsite

Flowers in society

- Flowers have always represented a way to add beauty and interest to our world

- Gardens represented a major form of entertainment for the wealthy

Herrenhaeuser (palace) garden, Hannover, Germany

Even today communities are maintaining these elements (at great expense)

The industry

- …is large!
- Larger than most other agricultural commodities:
    - Note: horticulture is part of agriculture
    - Horticulture: all sorts of protected cultivation including gardens, vegetable production
    - Wherever man has to impose a lot of activities on the plants to make them grow the way we want.
    - Billions are spent each year on ornamentals
    - Considerable scientific research goes into figuring out how to do it the best possible way.
        - And that has been happening for longer than most other industries

Example of old horticulture technology

- Orangerie (ancient greenhouse)

Example of old horticulture technology

- Old transplanter

Verpflanzgerät

1748 schickte das Hofbau- und Garten-departement einen Tischler nach Celle, um die genauen Maße der dort in Gebrauch befindlichen "Maschine" abzunehmen. Für 54 Reichstaler wurde sie dann in Hannover nachgebaut. Diese Pflanz- und Baumwinde leistete über einen langen Zeit-raum hervorragende Dienste.

Anhand der 1860 angefertigen Zeichnungen "zweier Baumwinden nach dem Muster der hier auf dem Berg-garten befindlichen derartigen, aber bereits über 100 Jahre alten, durchaus practischen Instrumente" läßt sich fast mit Sicherheit sagen, daß es sich um die Orangerieverpflanzungs-maschine von 1748 handelt.
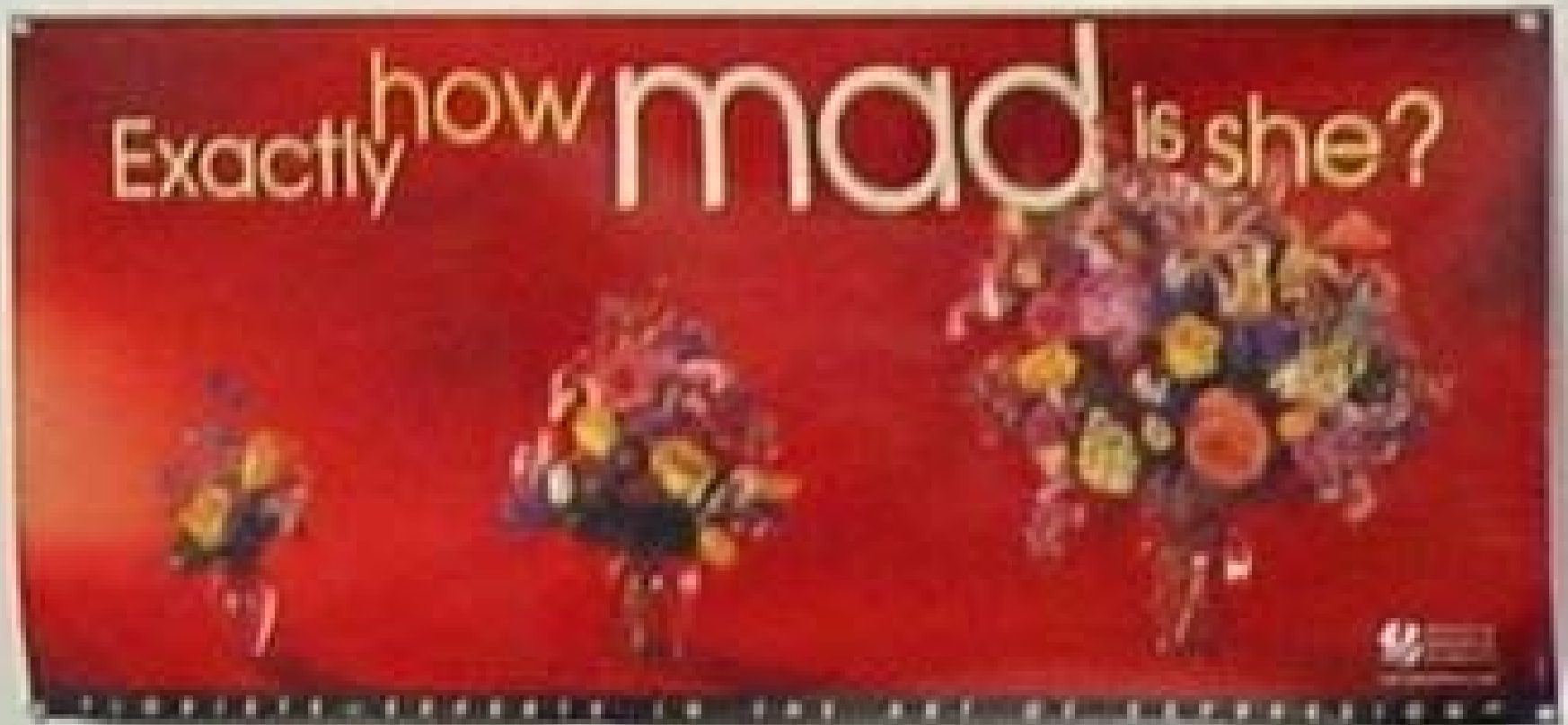
To learn more about horticulture

- Take courses in Plant Sciences (PLS)
- Take courses in Environmental Horticulture (mostly about ornamentals) (our major is EHUF)

Floriculture

- All about ornamental plants
  - Cut-flowers
  - Bedding plants (garden and landscape plants)
  - Container-grown landscape plants (nursery product)
  - Flowering potted pants and foliage potted plants (florist product)
- Production (greenhouse and nursery production)
- Making things last (postharvest handling)
- Using flowers

Some uses seem to be implicit

In this course

- Learn about many facets of flowers
    - How they are produced
    - Their names
    - How to handle them
    - Some facet of the science
        - Botany
        - Horticulture
        - Floriculture
    - Some facet of non-science part of the picture
        - Art
        - Social facet
        - Cultural facets

Scantron forms will be used in EACH lecture in the future.
Just today please do the following:

Get out a piece of paper and write on separate lines:

Line 1: your student ID #

Line 2: enter Family name

Line 3: enter Given name as it appears at smartsite

Line 4: The answer to the following: Where do you find the pop test questions for this lecture?

At the end of today's lecture as you leave, give the form to one of the TAs as you depart; do not give it to anyone else; also please show your student ID