

How to Identify an apple

With John Bunker

Super Chilly Farm,
PO Box 12, Palermo Maine 04354

outonalimbapples.com

maineheritageorchard.org

fedcoseeds.com



Why do we need apple identification ?

All historic and modern pomological writers have made mistakes

All nurseries have made mistakes

All orchards have mis-labeled trees



Fauxwhelp



Geneva Tremlett's



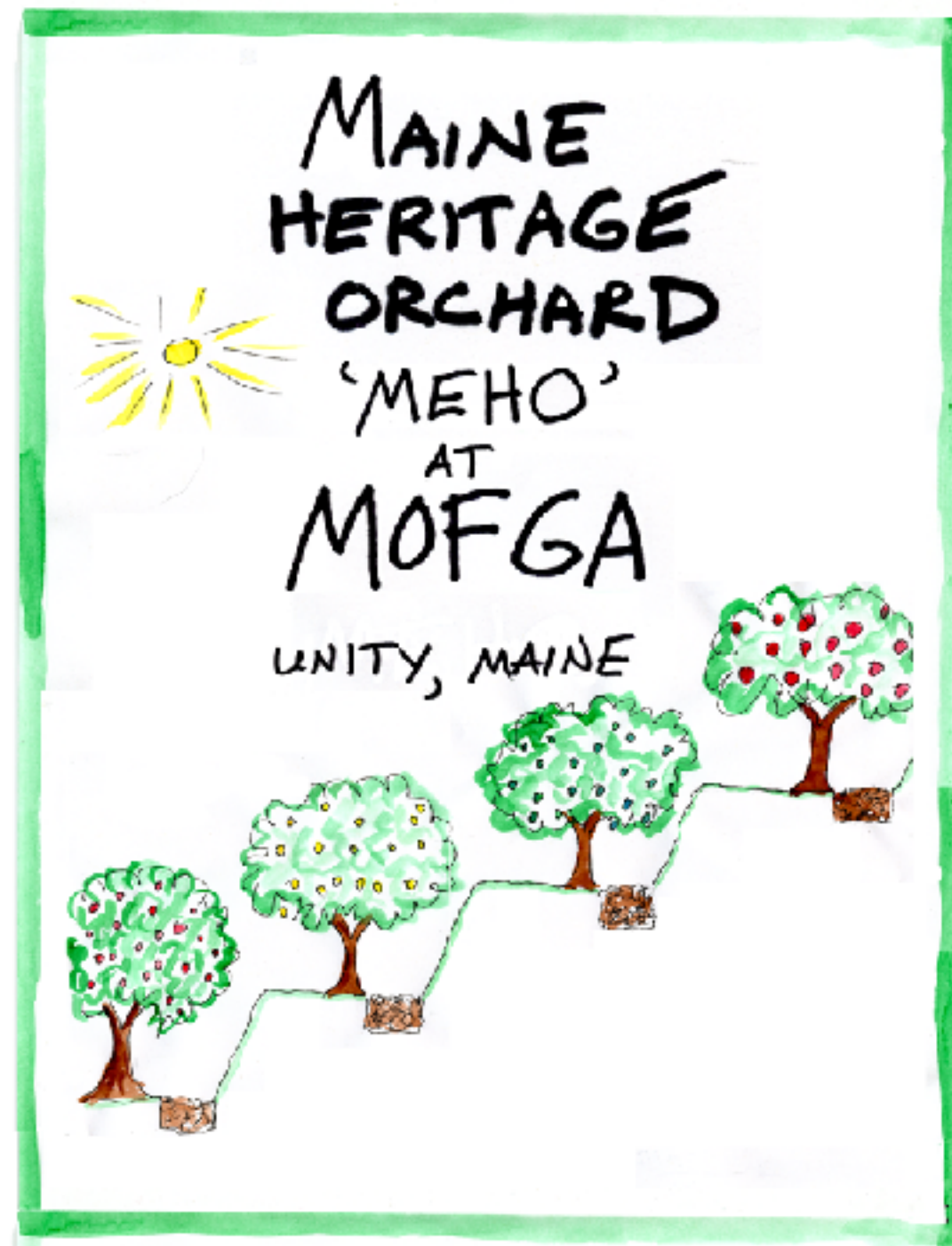
GR1---GR2

Why should you learn to do Apple ID's ?

You find something you like
but you don't know what it is

You want to sell or share something
and you want it to be correct

You want to preserve historic apples



It's also just fun to know what you have !



Three different ID scenarios

1. You have an apple AND a name:
a case of verification

2. You have an apple but NO NAME:
a case of lost identity

3. You have a name but NO APPLE:
a case of missing “persons”



A few important basics of apple identification



Channel Sherlock Holmes

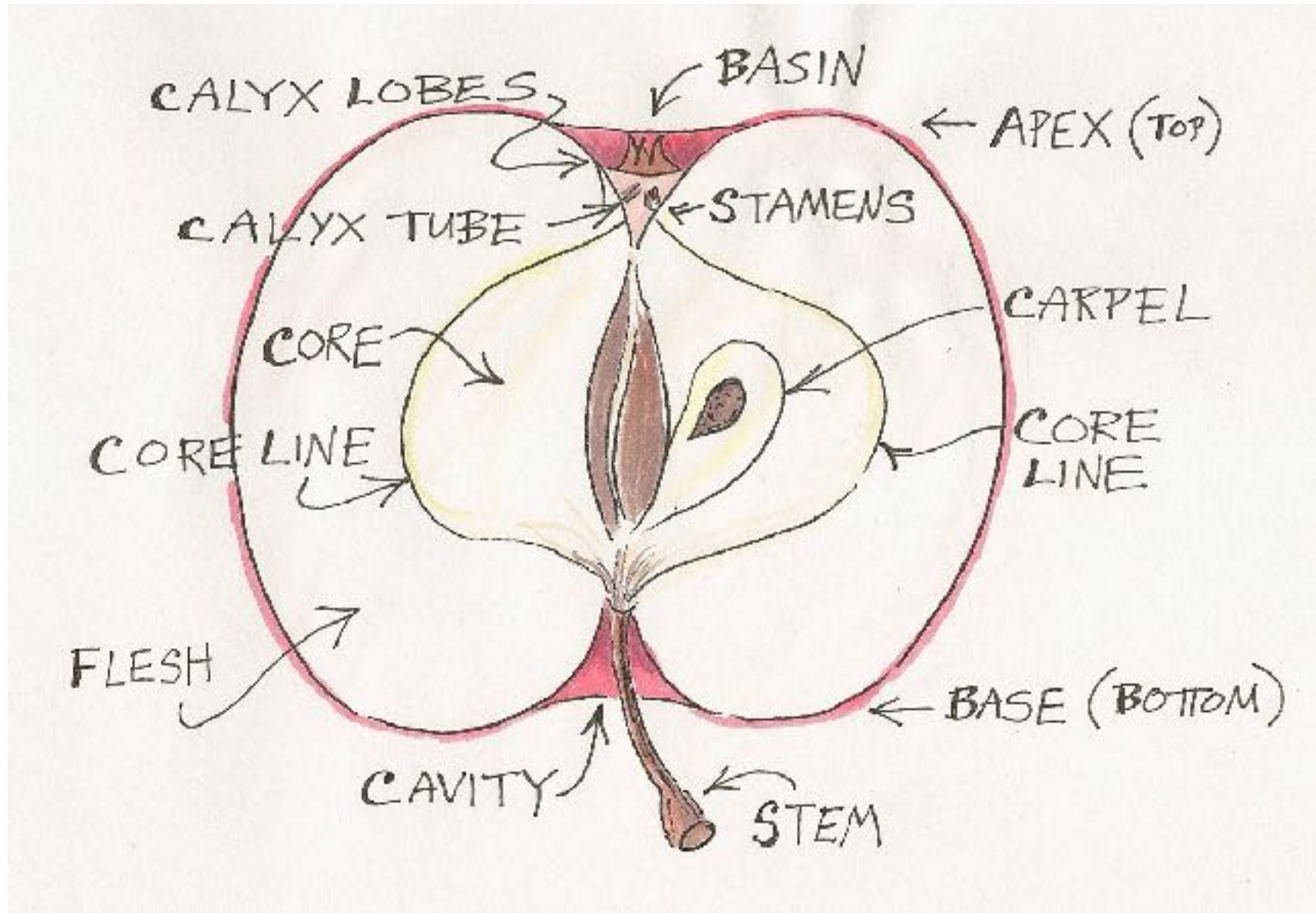
Become an observer !

“How often have I said to you that when you have eliminated the impossible, whatever remains, however improbable, must be the truth?”



Your job is to learn to eliminate the impossible as rapidly as possible !

Learn the parts of an apple and how to describe them



Learn to tell a seedling from a grafted tree

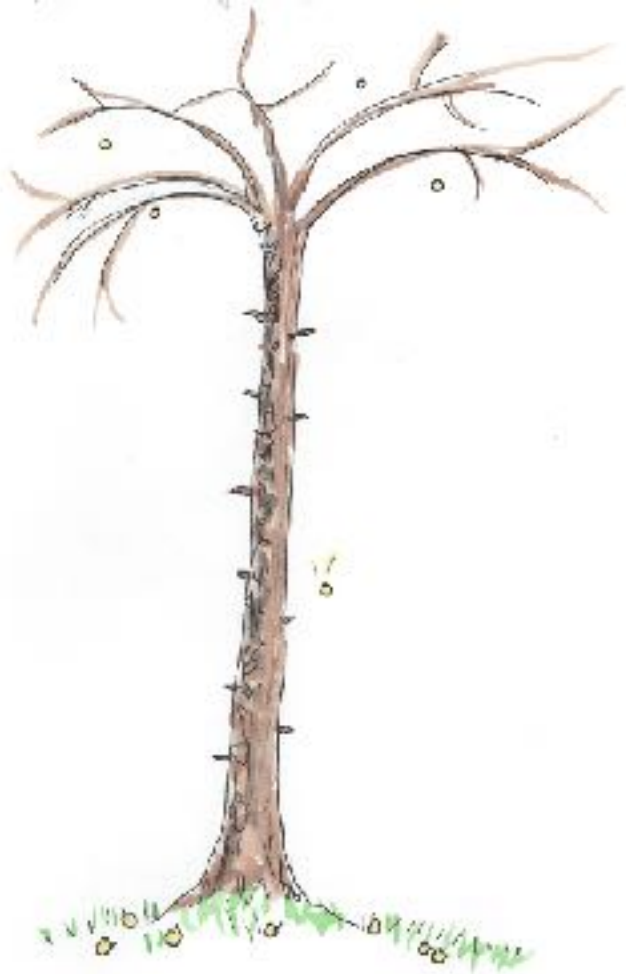


Some typical seedling apple trees

Seedling rootstock sprouts after grafted tree has died



Seedlings and grafted trees can look similar... at first



Seedling: no evidence of large lower branches

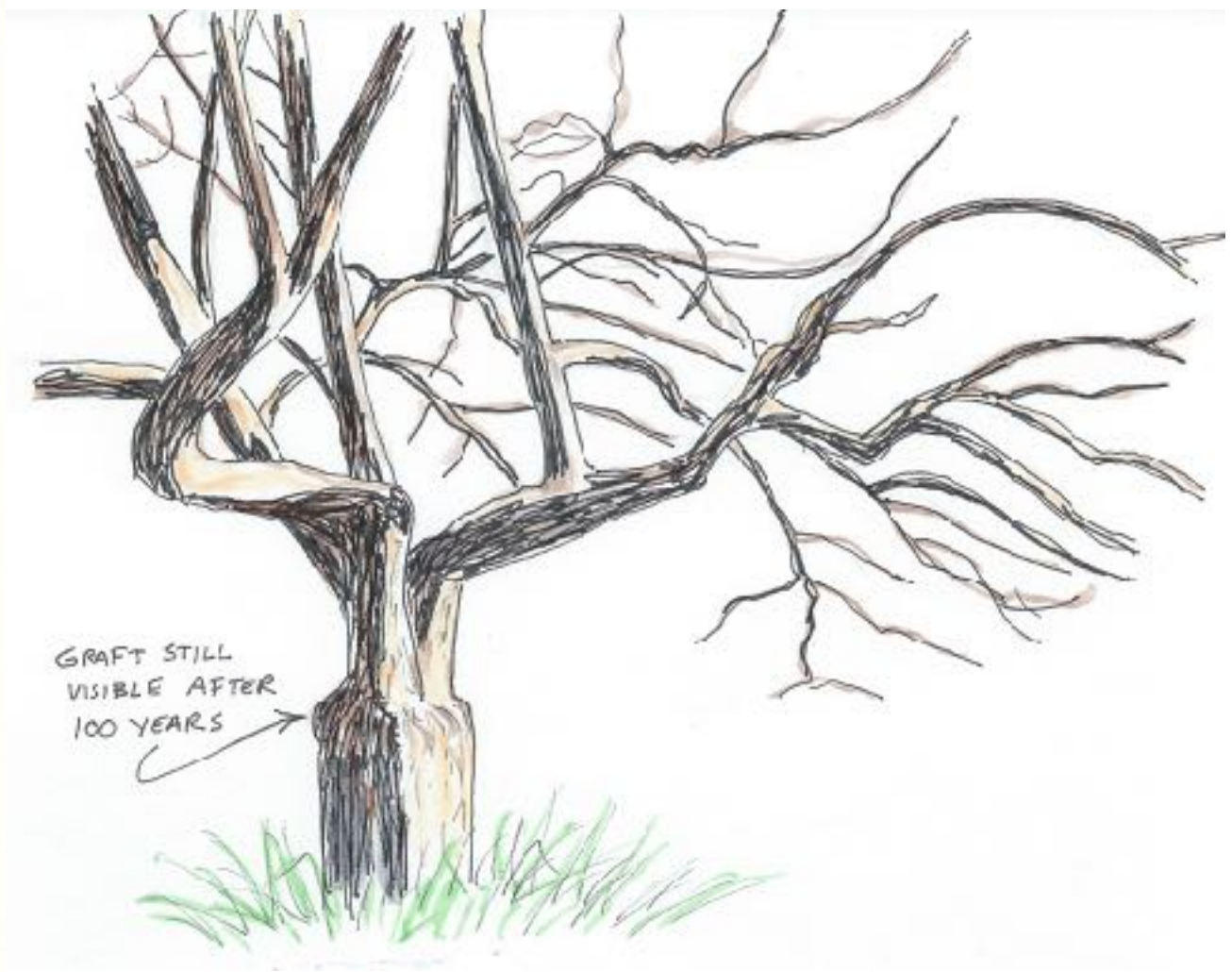


Grafted: remnants of old lower branches & graft

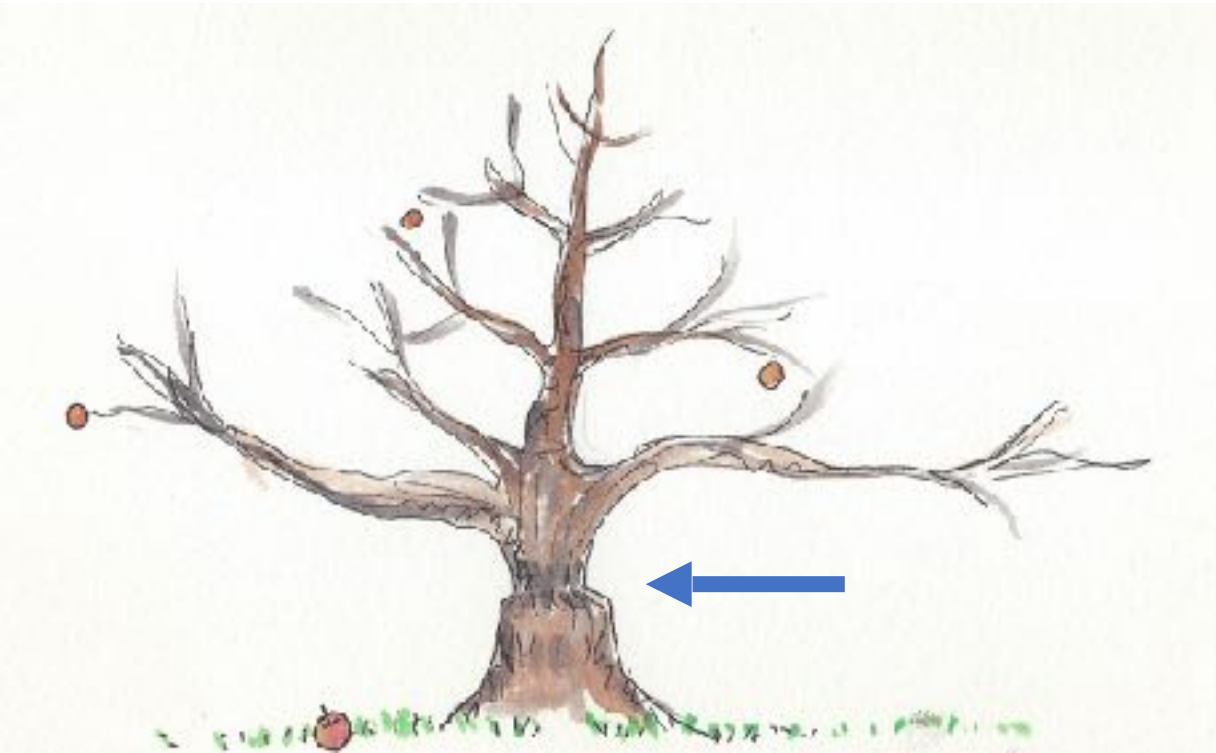
Typical old grafted trees



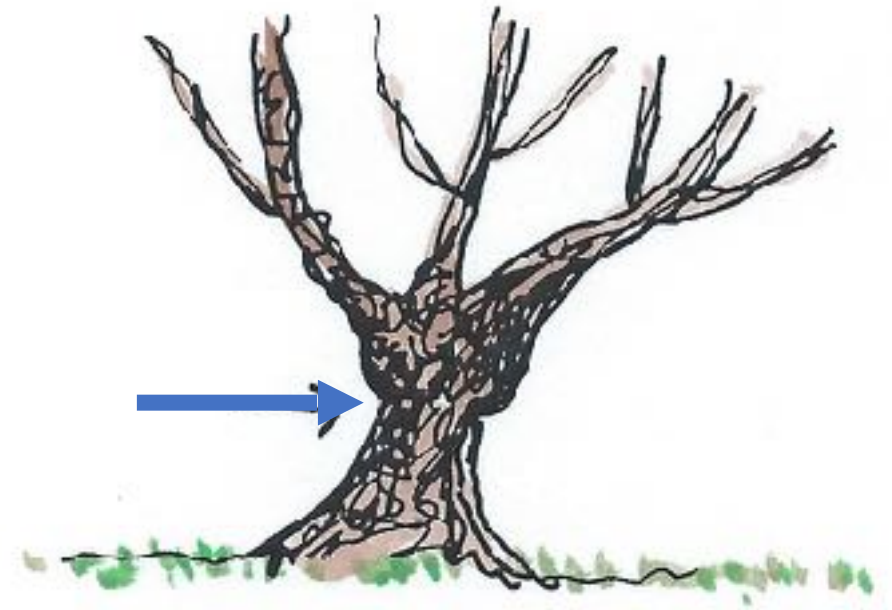
Typical old cleft-grafted trees



Grafted trees with graft visible



Rootstock more vigorous than scion

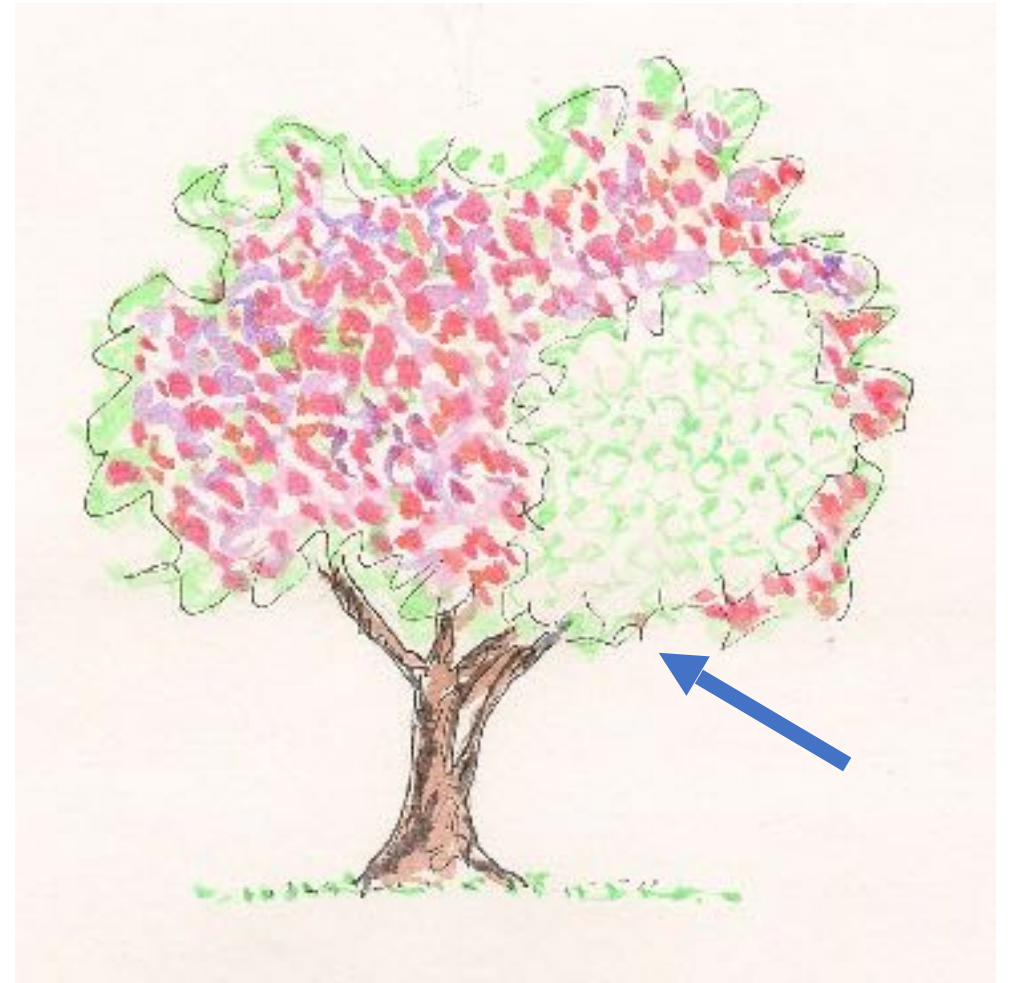


Scion more vigorous than rootstock

Grafted trees with rootstock sprout



Orchard tree: stem on right below graft has small fruit



Ornamental crab: stem below graft has white bloom

Learn to tell the age of apple trees
The age of the tree will often be a clue to the ID



Three Wealthy trees in Mercer, Maine known to have been planted in 1906

Become familiar with common historic (and modern) cultivars in your region.



Create lists by state, county and town

Learn the dozen most common cultivars instantly by sight...
You may not even know why you know



In the northeast, these would include
McIntosh, Cortland and Honeycrisp



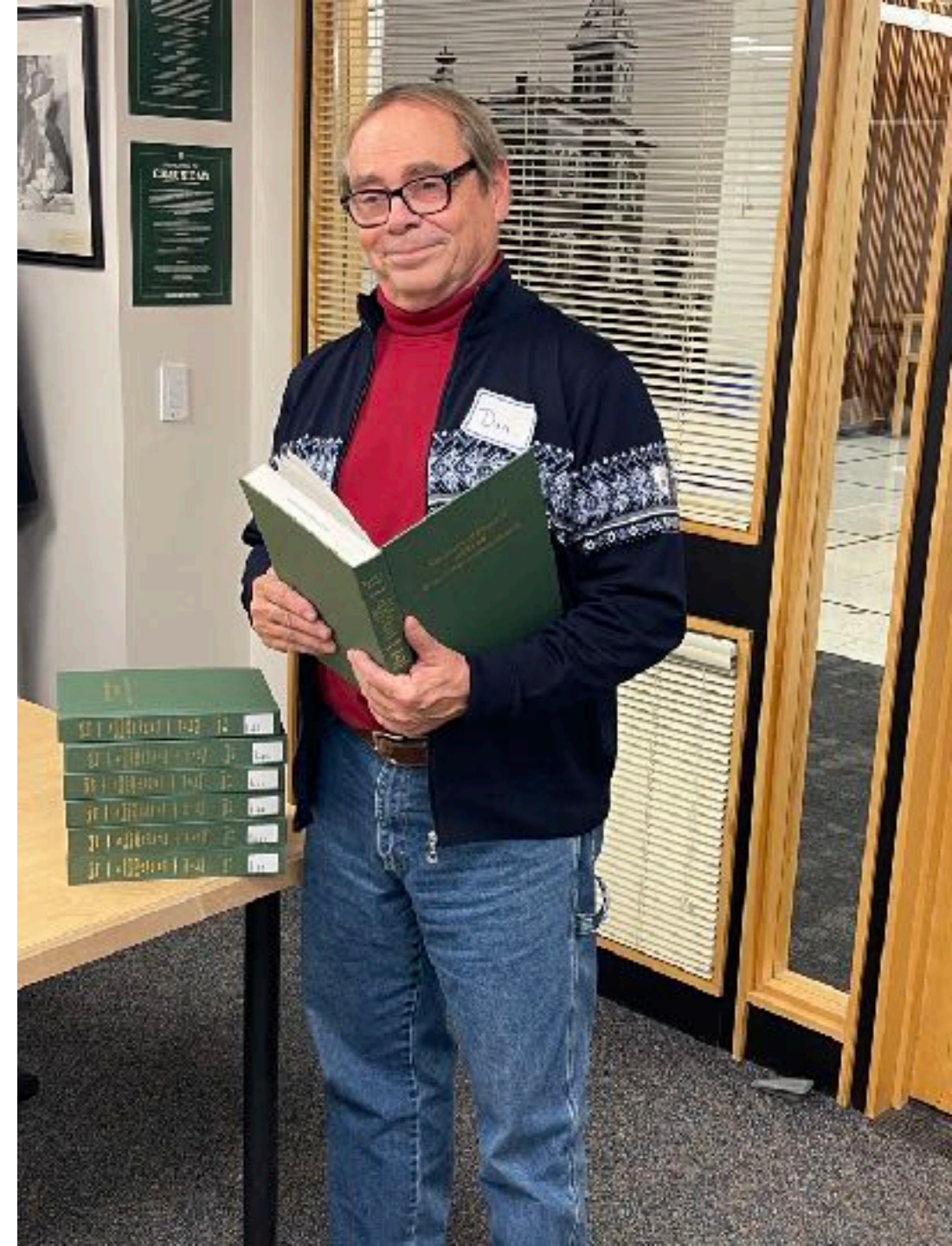
There are many excellent resources for apple
id



The Illustrated History of Apples in the US and Canada By Dan Bussey

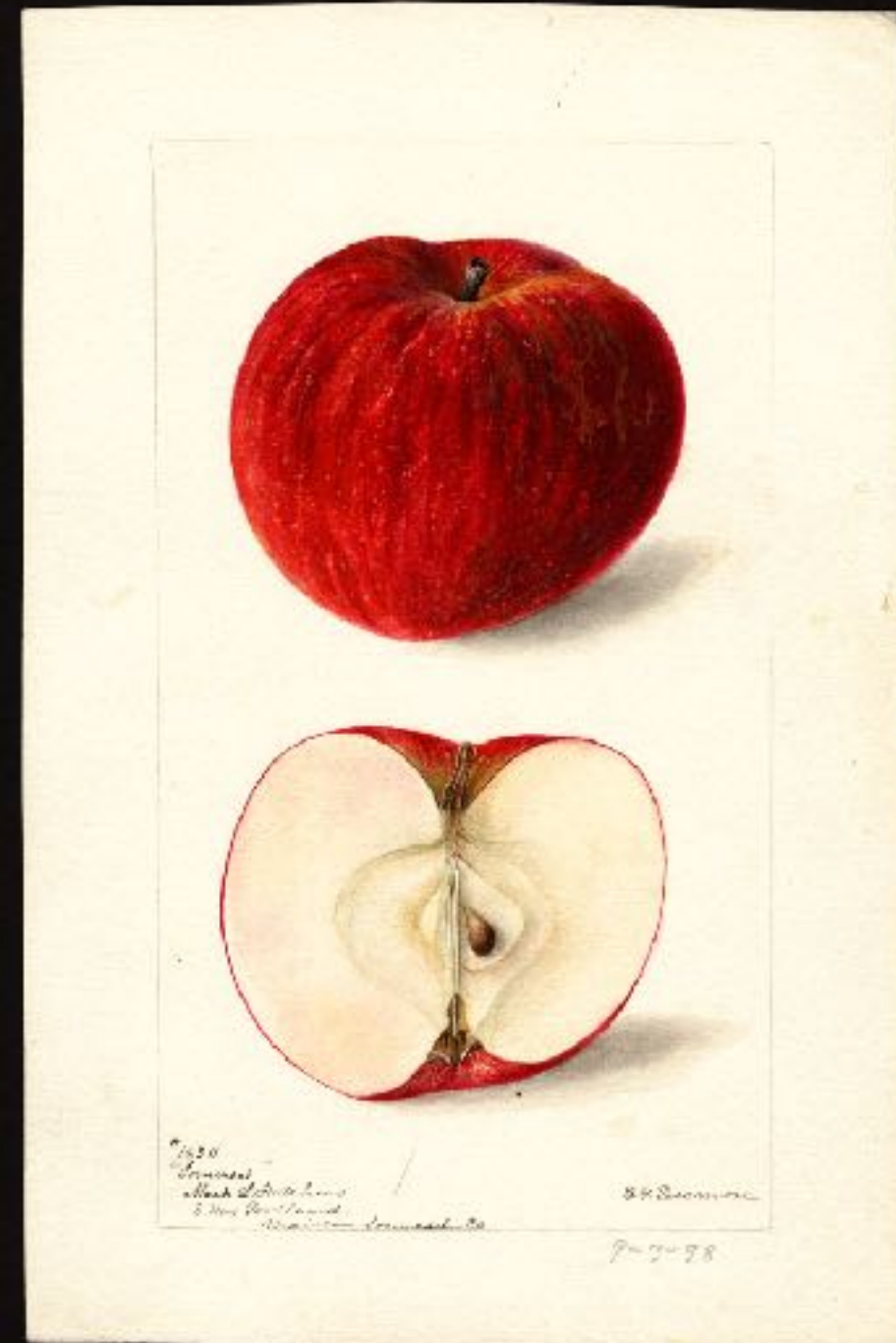


Shaun Shepherd, Nick Botner, jpb and Dan Bussey 2013



USDA Pomological Watercolors

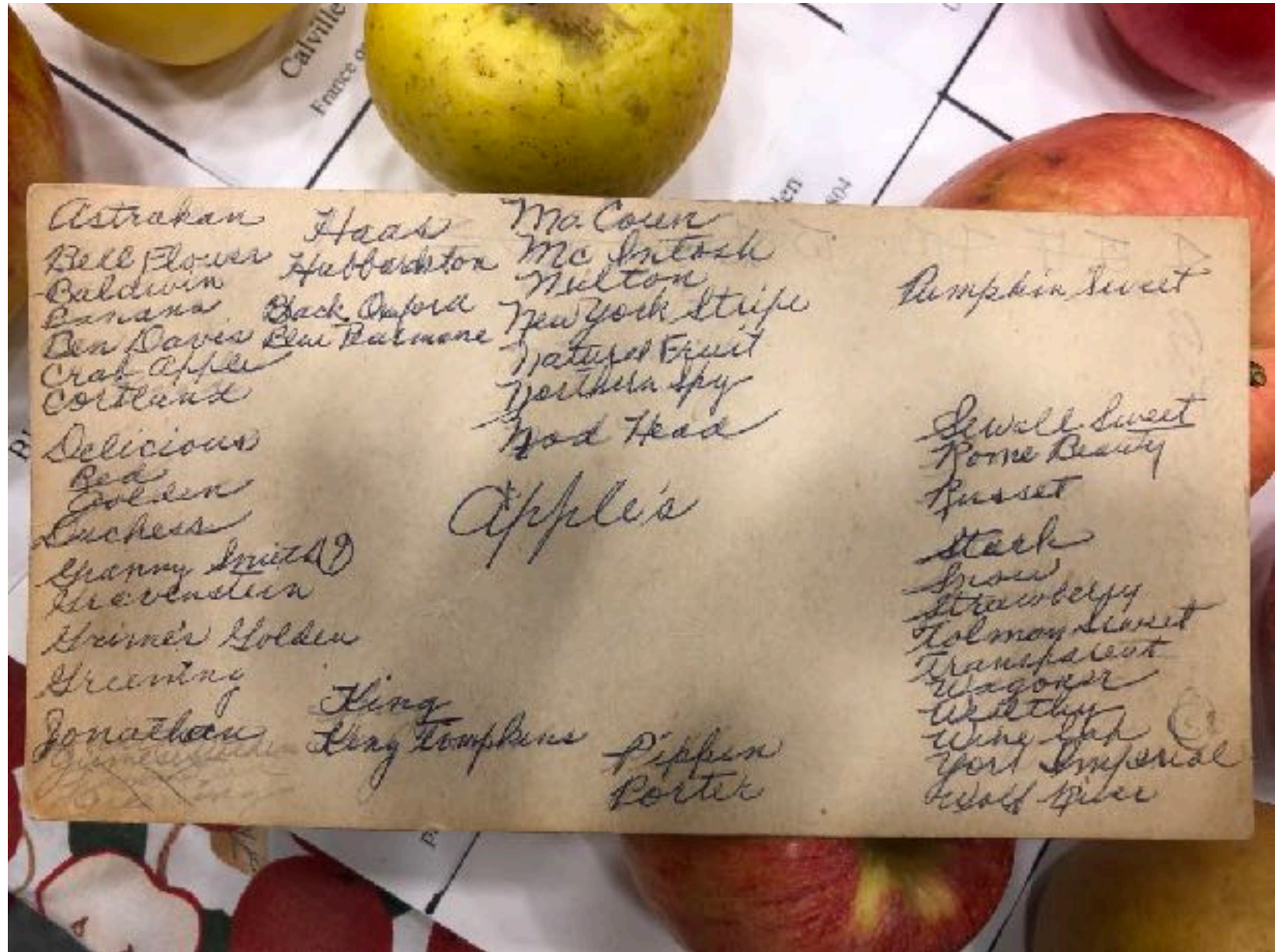
The Apples of New York by S.A. Beach



There are old-timers who would love to share with you



There are
random strangers
old newspapers
classic books
nursery catalogs
Pom. yearbooks
letters
journals
maps



myfruittree.org
DNA PROFILING



How it works

The reference panel

The simple test

The full test

What it can and can not do

When there is no DNA match

Sometimes the results come back:
“Unique Unknown”

This means there is No Match in the reference panel

It could be a seedling (aka natural fruit or chance seedling)

It could be a common cultivar not yet in the reference panel

It could be one of the rare cultivars you’ve been searching for



What about searchable keys?

Systematic Pomology by UP Hedrick, 1925

The American Fruit Culturalist by John Thomas, 1849

The Fruit Manual by Robert Hogg, 1886

Data Identification Resource Key
Bunker, Working Group et al, 2024



So let's getting identifying....

All three scenarios

Several examples of each



Scenario 1: You have the apple and [think you] have the name



Scenario 1: The process

Obtain 6-12 apples from *the* tree

Compare those apples to a reputable description of the cultivar

Submit leaves for a DNA “simple test” to Myfruittree.org

Compare DNA results to Bussey, Beach et al to confirm the results



Scenario 1. I was told it was Black Oxford



We were correct! A DNA “full test” also revealed the parents of Black Oxford



=



+



(Hunt Russet)

Scenario 1: But, don't believe everything you hear
We were told it was Duchess, Nutting Bumpus and New Brunswicker



We were skeptical and had them all tested

Scenario 1: what about local synonyms

DNA test showed Canadian Strawberry = Washington Strawberry



Who's right---who's wrong?

Scenario 1: we need to confirm collections
Tower Hill Botanic Garden collection
Hunt Russet: They were correct



Scenario 1: The reference panel can be wrong
Chandler DNA tested as Northern Spy



CHANDLER



Northern Spy

Something doesn't make sense
What happened?



Northern Spy

Scenario 2.

You have an apple
but no name:
a case of lost identity



Scenario 2: The process

Obtain 6-12 apples from the tree

Is it a seedling or a grafted tree

Compare your apples to a list of what was found in that location

Consult your resources



Possibly submit leaves for a DNA “simple test” to [Myfruittree.org](https://myfruittree.org)

Compare DNA results to Bussey et al. to confirm reference panel

Scenario 2. Do you have a seedling or a grafted tree?

Roberto brought me
this apple

I thought: Ben Davis

We argued !

I visited the tree

Clearly a seedling



Has become a favorite and is now in our orchard. We call it "Roberto"

Scenario 2: old trees in the neighborhood



Old tree on land we purchased

Consulted lists of local fall cultivars

Made an educated guess

Years later did DNA simple test and was correct



Fameuse tree, Palermo Maine

Scenario 2. commercial orchards can be wrong

Commercial orchard-friend's apple was said to be Pound Sweet
But the season was totally wrong... It had no name to me

We did the DNA simple test: It came back as Sweet Bough. Wow, that was easy !



Scenario 2: old letters and old-timers



A neighbor's old tree
had me perplexed for years
For awhile I wanted it
to be Blake... but had doubts



Scenario 2. old letters and old-timers

Had a letter from Josephine Shorey

Got to know Tower Hill Apples

Sent apples to Tom Burford

DNA profiled... correct !



Grimes at Tower Hill Botanic Garden



Scenario 2. read the historical texts

Old tree probably grafted

Maine Pomological Yearbook article

Believed to be Kennebec Russet

DNA unique unknown

Will likely be added to Reference Panel



Scenario 2. the full test can be useful

Out exploring & found ancient tree

Determined it was grafted



Scenario 2. the full test can be useful

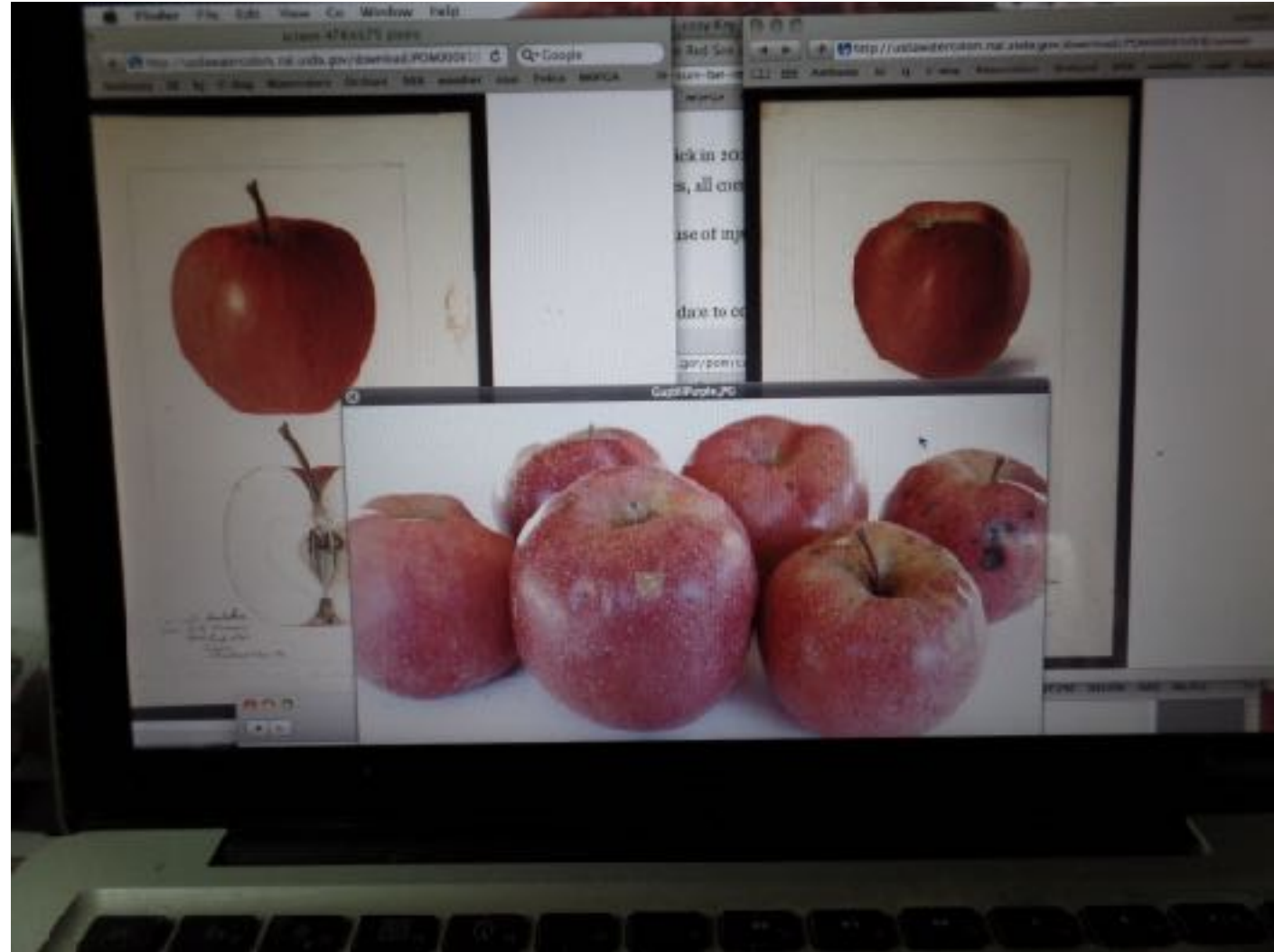
Reread Apple Varieties in Maine

Compared them USDA Watercolors

Made a guess: Arabkoe (Arabskoe)

Submitted leaves for a full test

Results came back “Unique
Unknown”



Scenario 2. the full test can be useful



Did full test: showed the parents, which meant could NOT be Arabkoe (Arabskoe)

Next: use the parents combined with historical information to make a new guess

We'll compare our next guess with Bussey and historical record

Scenario 2: embrace the Unique unknowns

Tree from ancient orchard

Two trees with identical fruit

DNA profiled 2023

Results: Unique Unknown

Likely one of the rare lost cultivars we're hunting for

Time to start reading !



Scenario 2: the tree age must make sense

Had two favorite identical trees in an old orchard

Thought they might be Brigg's Auburn, originating in Minot, Maine



Scenario 2: the tree age must make sense

Found the same fruit
on the oldest farm in
Minot

Could they be Brigg's?

Were the trees old
enough?



Scenario 2: the tree age must make sense !

Compared them to the USDA watercolors



Scenario 2: the tree age must make sense

Found this tree. Someone thought it was Northwestern Greening. It made sense



DNA Confirmed it. Darn !

3. You have a name but no apple: a case of missing “persons”

Scenario 3:

The process:

Newspaper articles

Road time

Old Timers

Wanted Posters

Be a Magnet

Displays, tastings, talks

Keep eyes wide open



3. You have a name but no apple: a case of missing “persons”

Submit an article to the local newspaper



Scenario 3: Road time

Track down the location where the cultivar originated or was grown



Scenario 3: You may have to convince someone besides yourself

What would Frank Getchell say?



Starkey in Vassalboro, Maine

Scenario 3: Be a magnet

Assemble displays at fairs and other events

Give talks

Do tastings



Moses Wood



Scenario 3: You see but you don't observe !

Eyes wide open !



Scenario 3: Keep eyes wide open (part two)

Just a local history pamphlet



Dudley Winter (aka Northstar)



Sophie Olson and Walfred Jacobson.
She planted the trees.

Scenario 3: THE WANTED POSTER

WANTED
~ALIVE~



LARGE FRUIT
A FEW DOTS
RED STRIPES AND SPLASHES
OBLATE SHAPE

SARAH APPLE

last seen in East Wilton, Maine !

Originated on the farm of John Tetts in East Wilton about 1810. Original tree still standing in 1873. Ripens in October.

Fruit description: Large oblate (fatter) conic shape; Shaded with red stripes and splashes of darker red. A few light dots. Stem short. Deep Cavity (stem depression). Flesh: white, coarse, tender, juicy, brisk "sub-acid" (slightly tart), best for cooking.

IF YOU KNOW THE WHEREABOUTS OF THIS APPLE, PLEASE CONTACT
NORGA PO BOX 101, UNITY ME 04988 (207) 548-4142



Scenario 3: WANTED ALIVE (And hope they notice)



Compare to historic texts

Do a DNA profile

Hope it's unique unknown



Scenario 3: Be careful what you wish for

She took me to Seneca Remick's farm and I was so sure we'd found it !



When we finally had it DNA profiled... It was King of Tompkins County. Darn!

Scenario 3: Be careful what you wish for



BEHIND SENECA REMICK
POSSIBLE MARLBORO 12/2022

But now we think we've found it in the back yard. Fingers are crossed !



So there have it...

You might have the apple AND the name:
the case of verification

You might have an apple but no name:
the case of lost identity

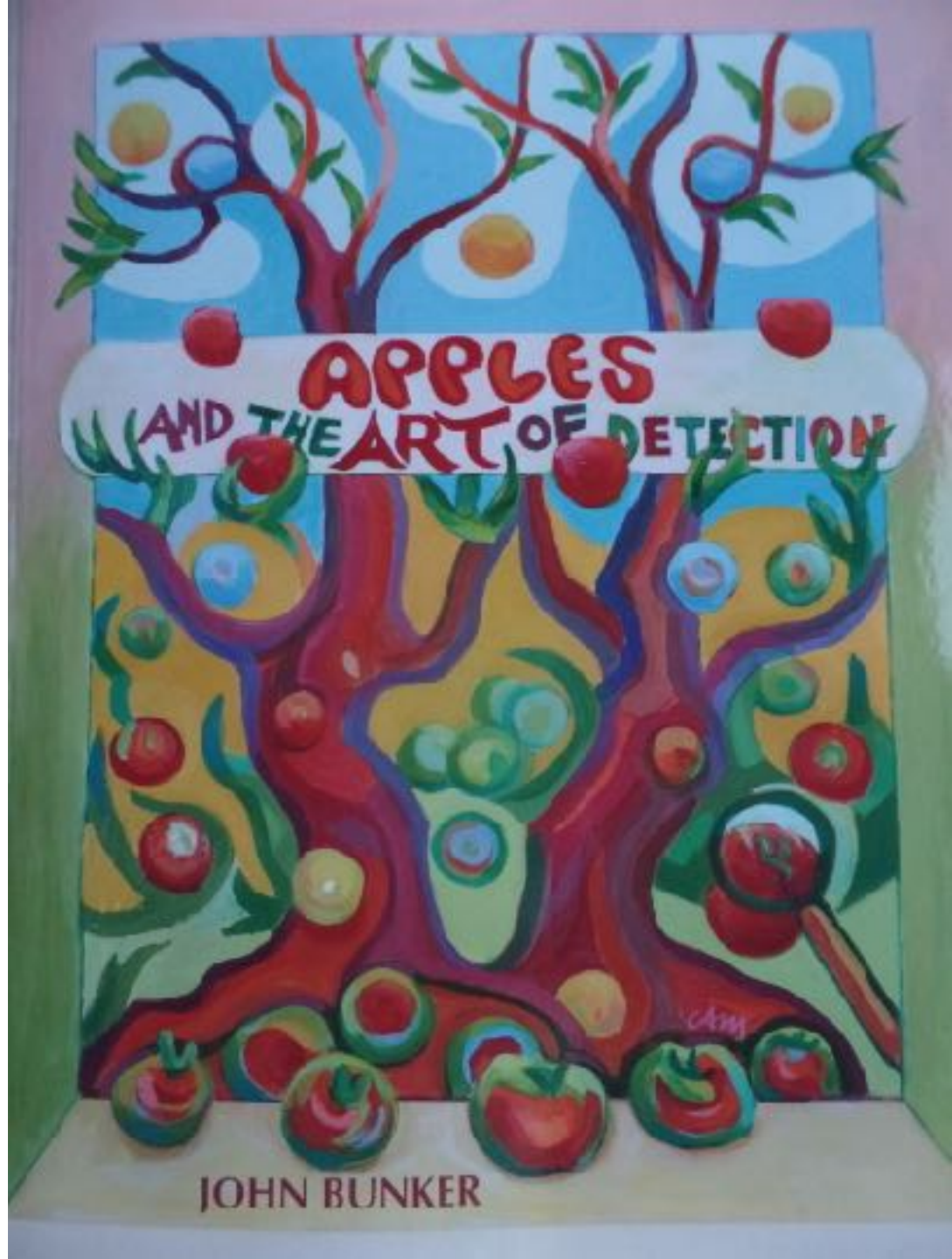
You might have a name but no apple:
the case of missing "persons"

For more information check out:

Apples and the Art of Detection

Available at Cidercon and from

outonalimbapples.com



And so the work goes on...



We are the torch-bearers

You too can do apple ID's and give talks...
for free whenever possible



You'll be amazed at what you just might find



You'll sleep better and the world will be a better place!



Thank you !