Data visualization and reporting with Tableau
Class #4, March 7 2023

Silvie Cinková cinkova@ufal.mff.cuni.cz

Dashboards

- communicate your topic in a way that captures your audience
  - plots and spreadsheets
  - text
  - images & pictograms
  - videos
  - interaction

Google Classroo

Looker Studio

Use my own data | Edit and share

udents | Classes | Info

Google Classroom activity report

Org Unit

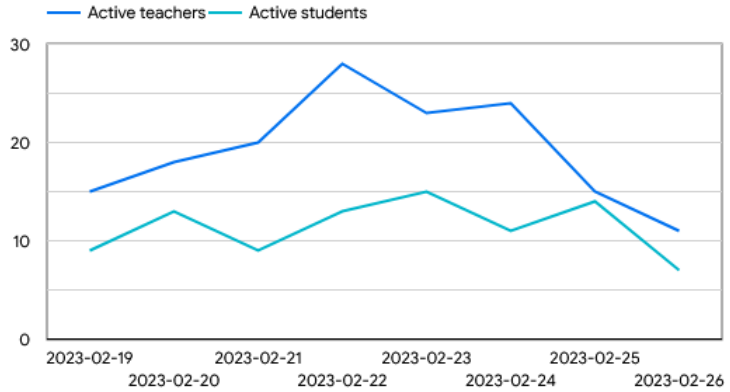
Last BQ Export Date
2023-02-26

Feb 19, 2023 - Feb 25, 2023

Active users by role

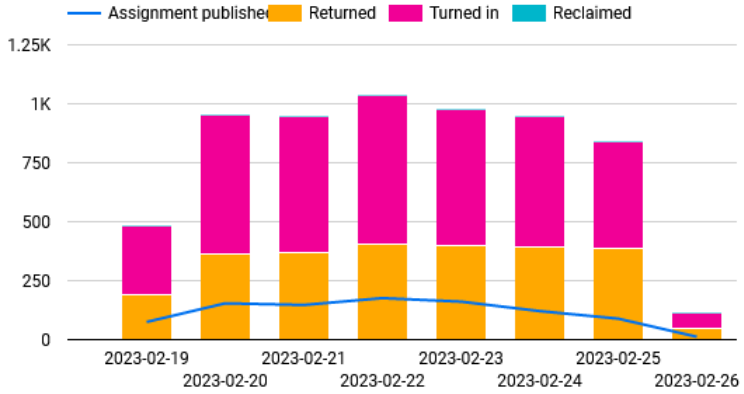
Active teachers	Active students	Total % Active
46	36	4.65%
-8.0%	-65.4%	-51.0%

* Total % Active represents percentage of active users in domain using Classroom



Assignment activity

Assignment published	Assignments returned	Assignments turned in
935	2,558	1,344
-20.0%	1.8%	-3.9%



Timeline of all Classroom activity

https://public.tableau.com

salesforce

+ableau+public Create Resources Sign In

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Welcome to Tableau Public

A free platform to explore, create, and publicly share data visualizations online.

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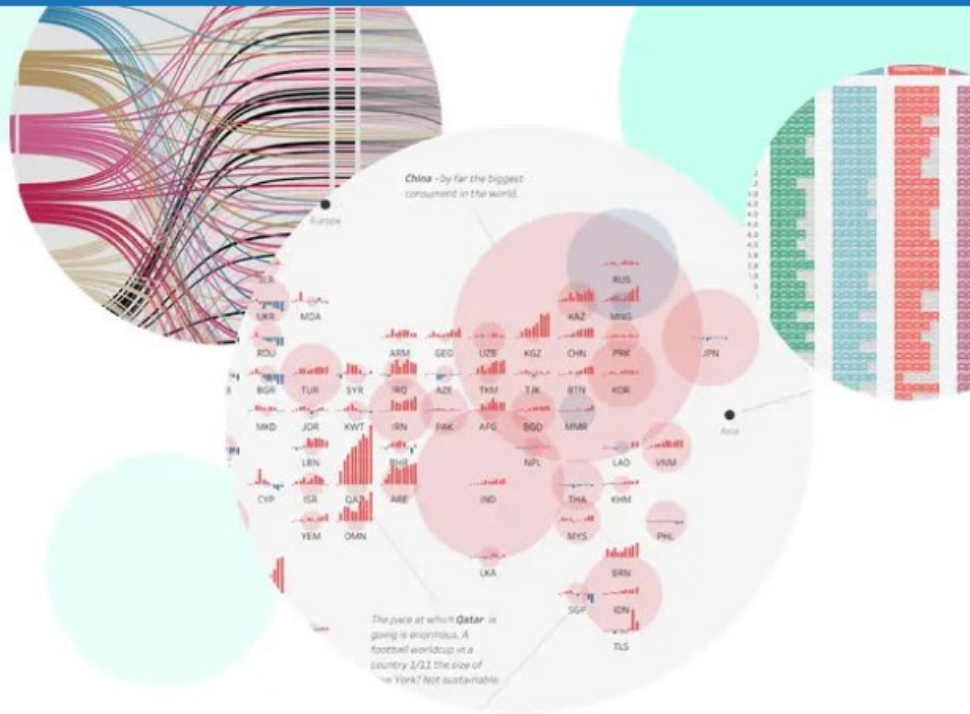
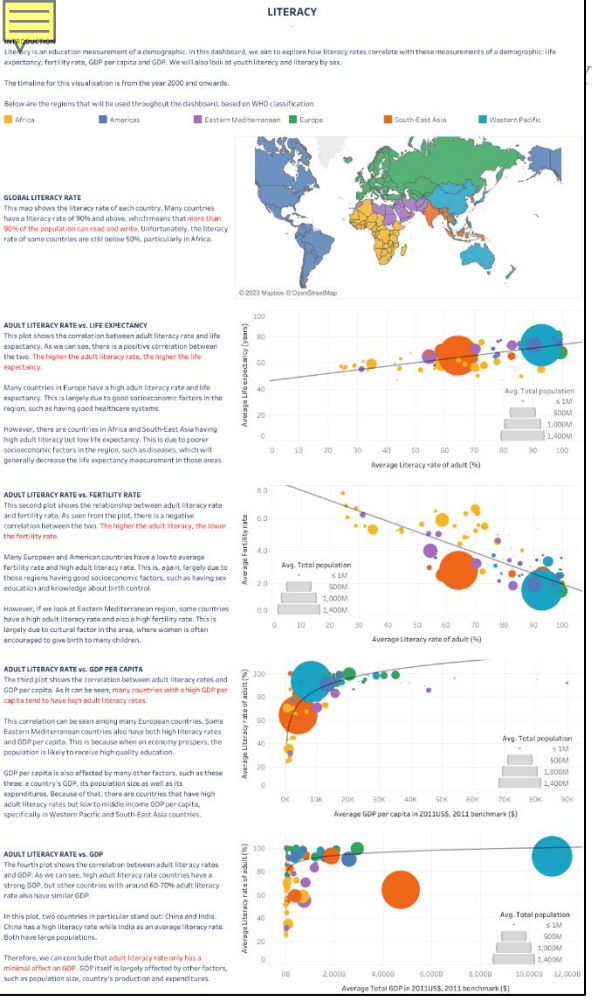
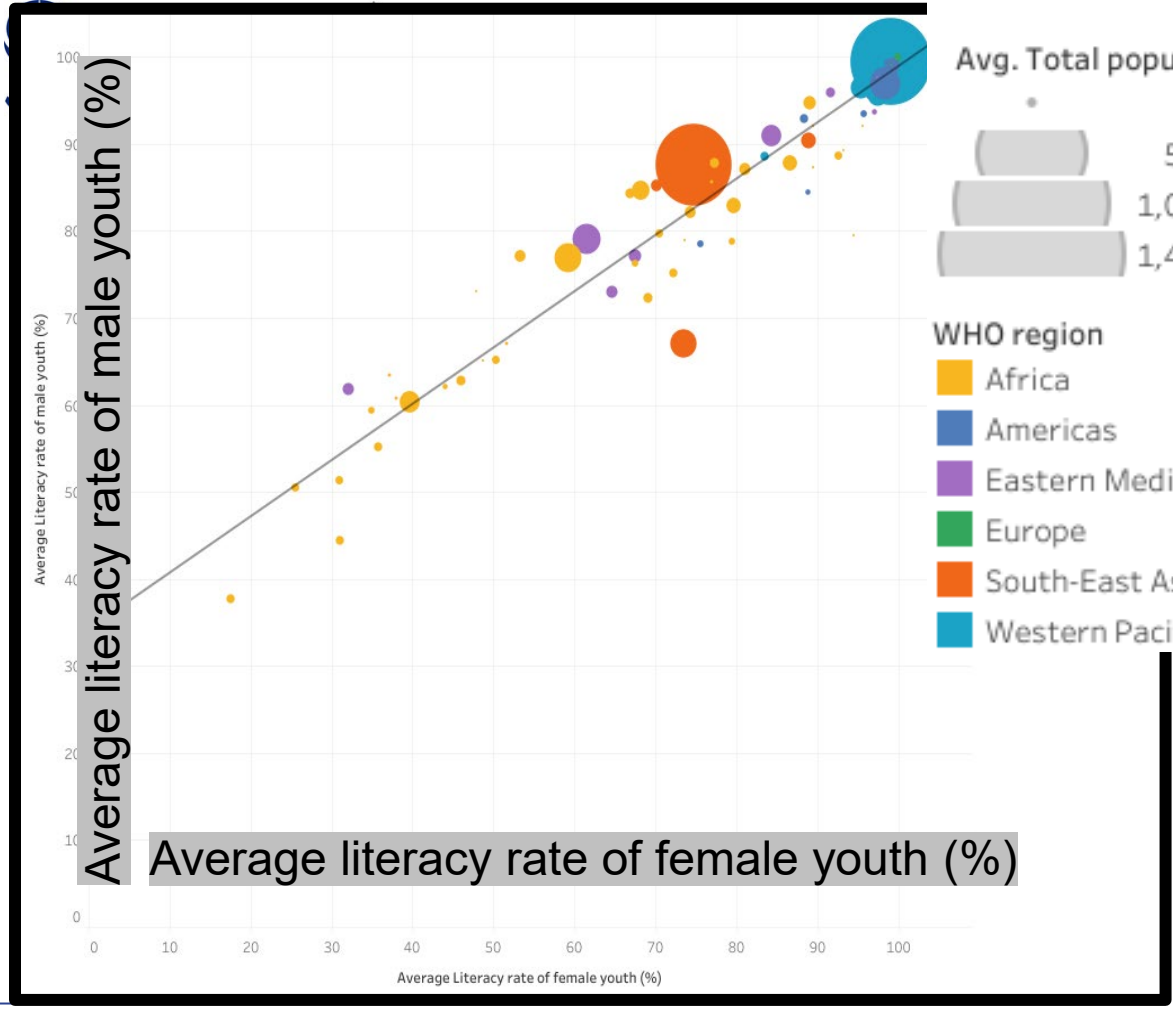
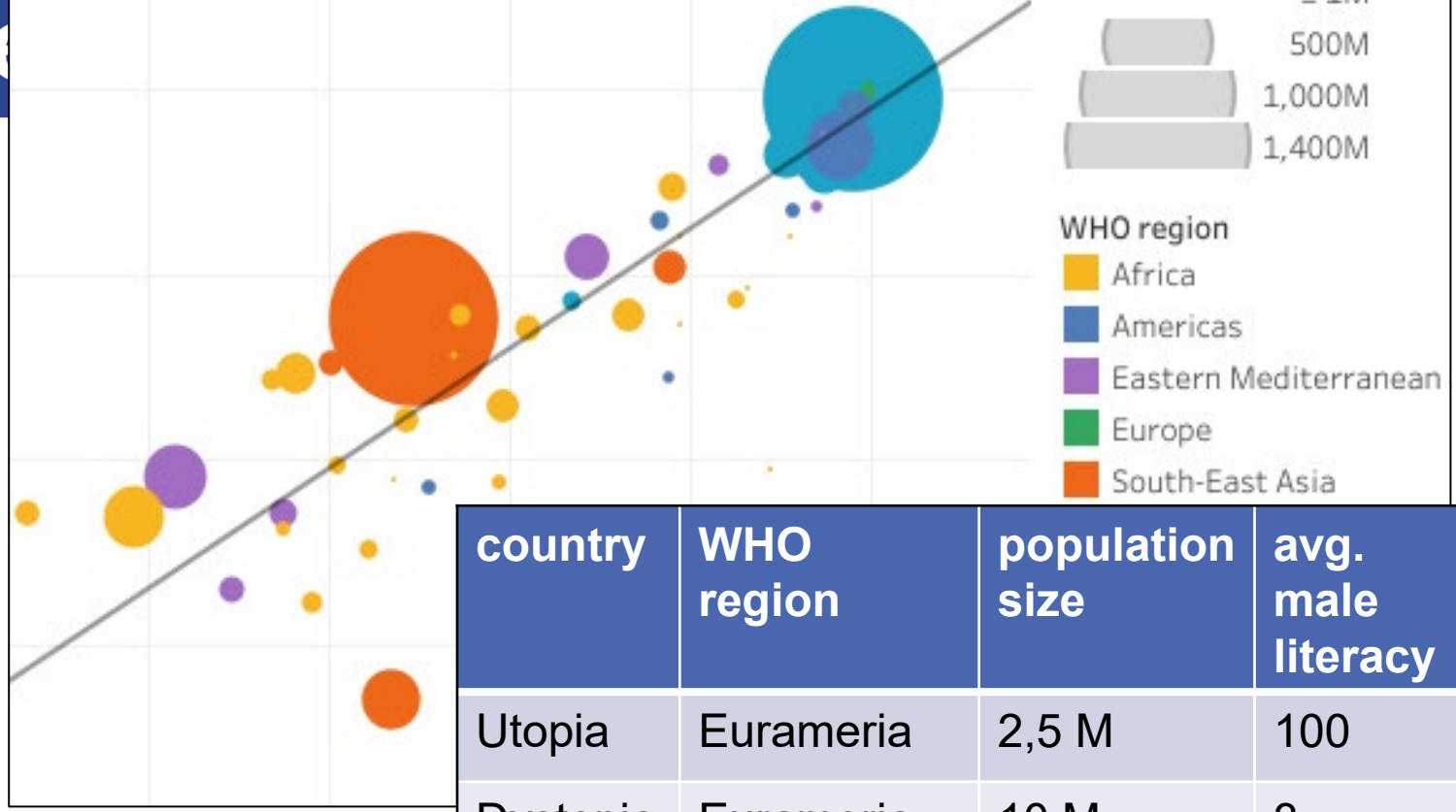


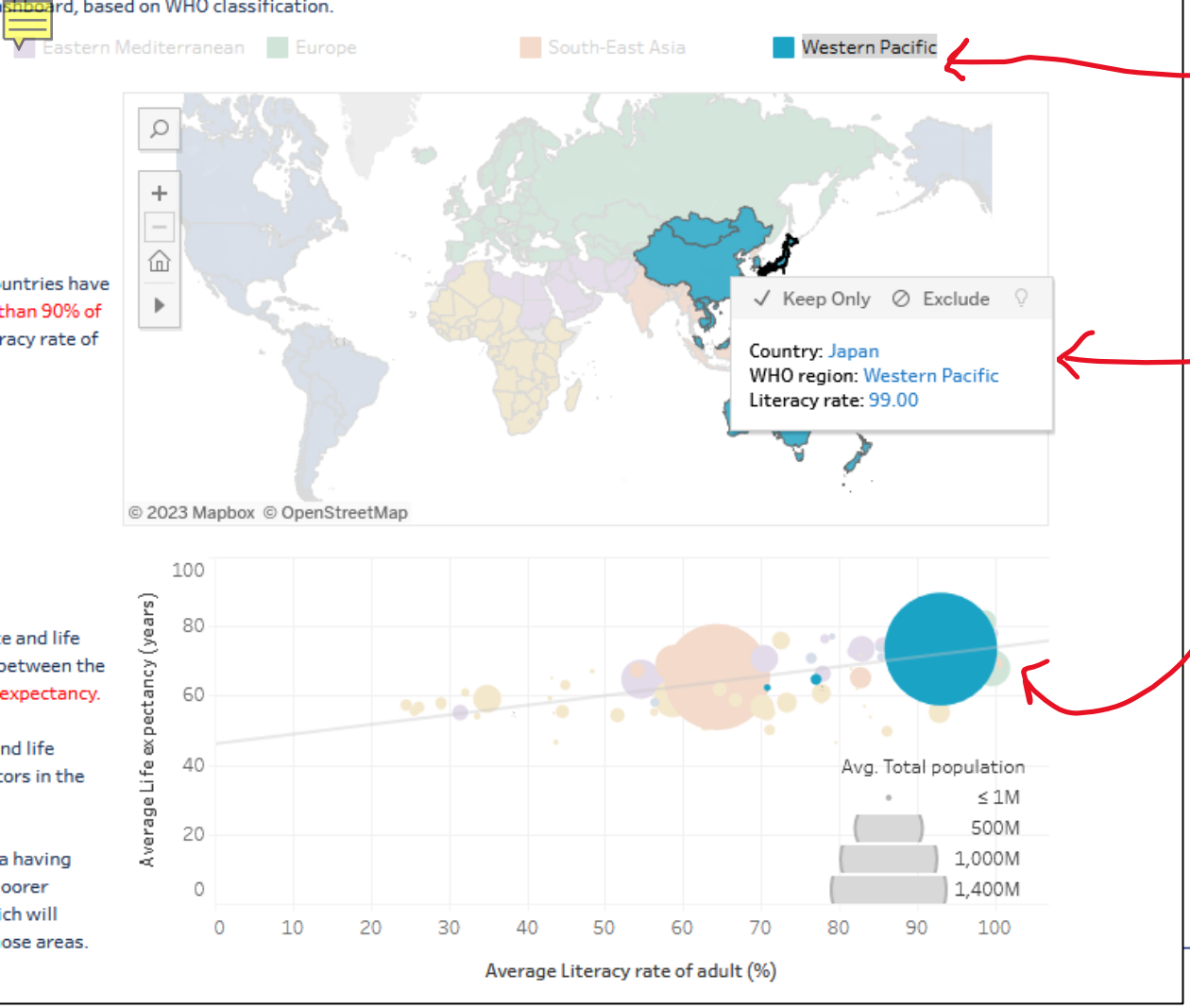




https://public.tableau.com/shared/NG42F2PYJ?:display_count=n&:origin=viz_share_link



country	WHO region	population size	avg. male literacy	avg. female literacy
Utopia	Eurameria	2,5 M	100	100
Dystopia	Eurameria	10 M	3	1
...	...	...	...	...

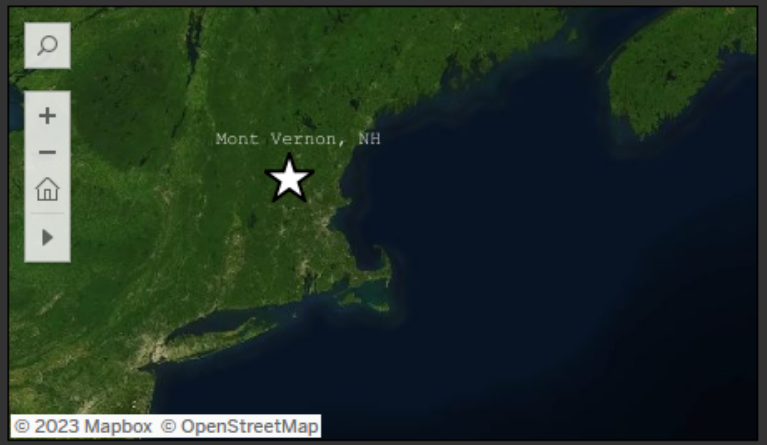

hboard, based on WHO classification.
Eastern Mediterranean
Europe
South-East Asia
Western Pacific
Keep Only
Exclude
Country: Japan
WHO region: Western Pacific
Literacy rate: 99.00
© 2023 Mapbox © OpenStreetMap
Average Life expectancy (years)
Average Literacy rate of adult (%)
Avg. Total population
≤ 1M
500M
1,000M
1,400M
interactive filter
pop-up "tool tip"
controls all plots

https://public.tableau.com/app/profile/william.strouse/viz/Twenty-TwoWhiteOrchids/Twenty-TwoWhiteOrchids

You will soon have access to your Tableau Public account using your Tableau login information. To learn more,

Twenty-Two White Orchids by Will Strouse

I live here



Nestled in the rolling hills between the Monadnock Mountains and the Nashua River Valley **in Southern New Hampshire.**

Since my family and I moved to M
November of 2018, we have discov
of wild mammals, birds, insects,
wildflowers but I **never expected**
orchids.

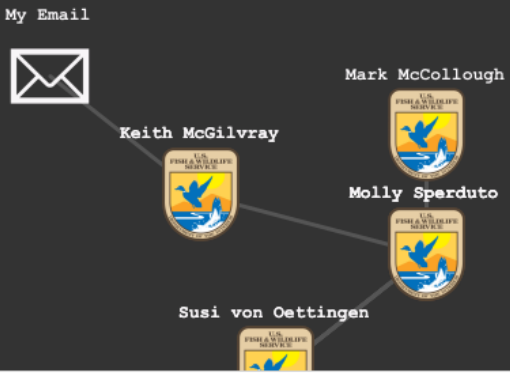
After exactly a minute per orchi
phone-pic and eleven minutes of
sure that we had identified twen
endangered Eastern Prairie Fring
(Platanthera leucophaea), **the fi**
sighting in New Hampshire!

Maybe it was a totally new speci
of fame and glory? I should name
daughter and achieve Super-Dad s
life.

I would need an expert to verify
help me fill out some paperwork
"Planathera abigailea's" made it
new edition text books and field
only eleven minutes of research
minutes of field observation, I w

Twenty-Two White Orchids by Will Strouse

Invigorating instant gratification. Time to ask the experts.

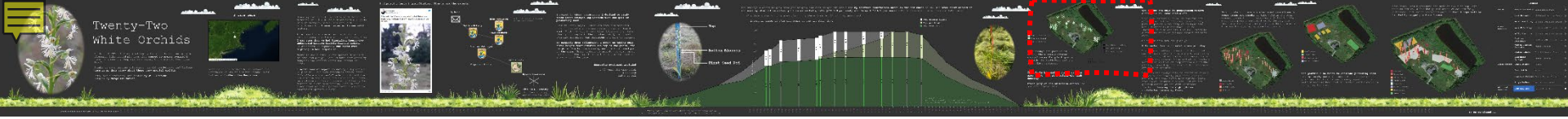


< Hover to see snips from my actual email chain.

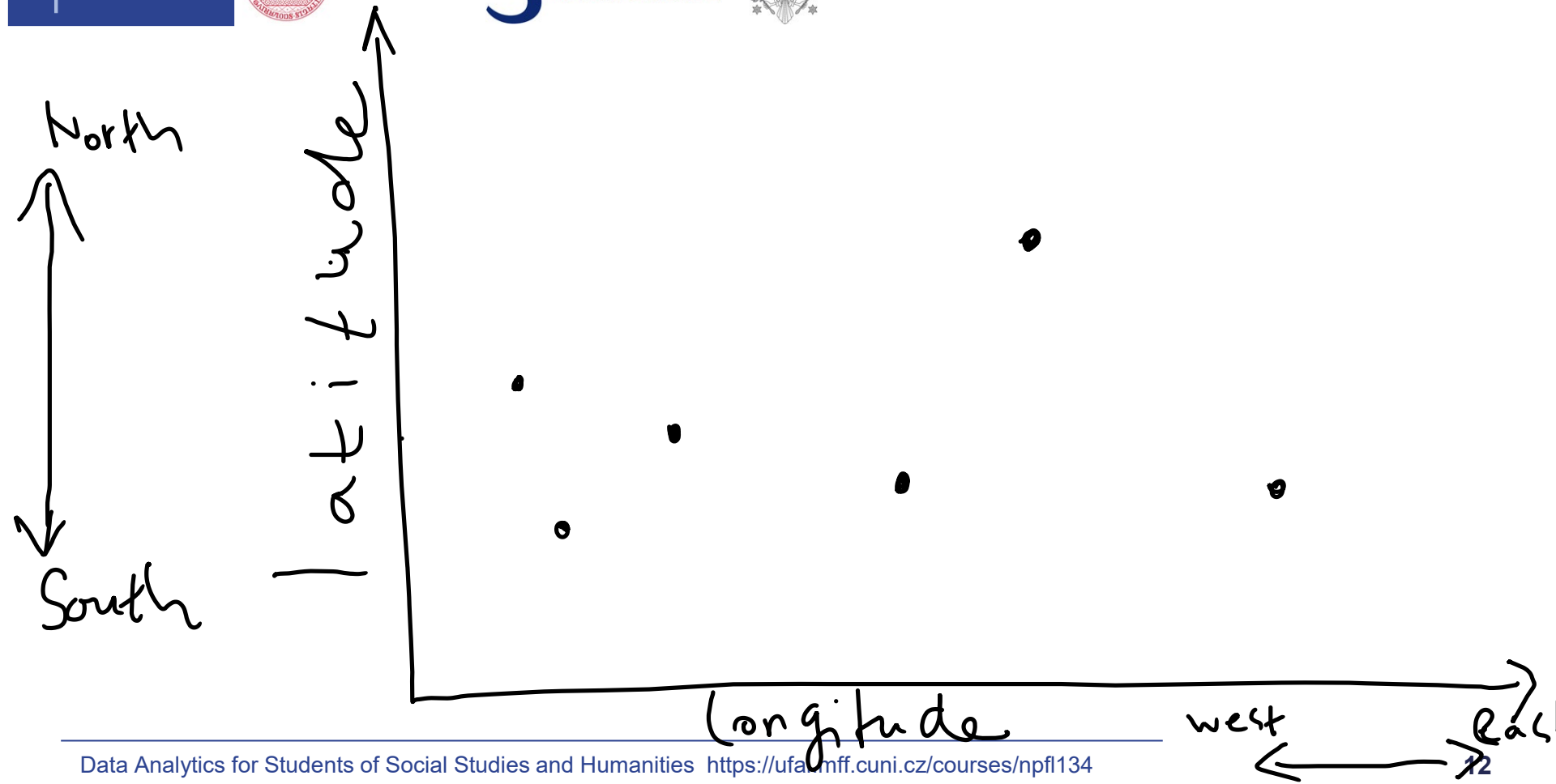
Susi von Oettingen
Endangered Species Biologist, New England Field Office
US Fish & Wildlife Service

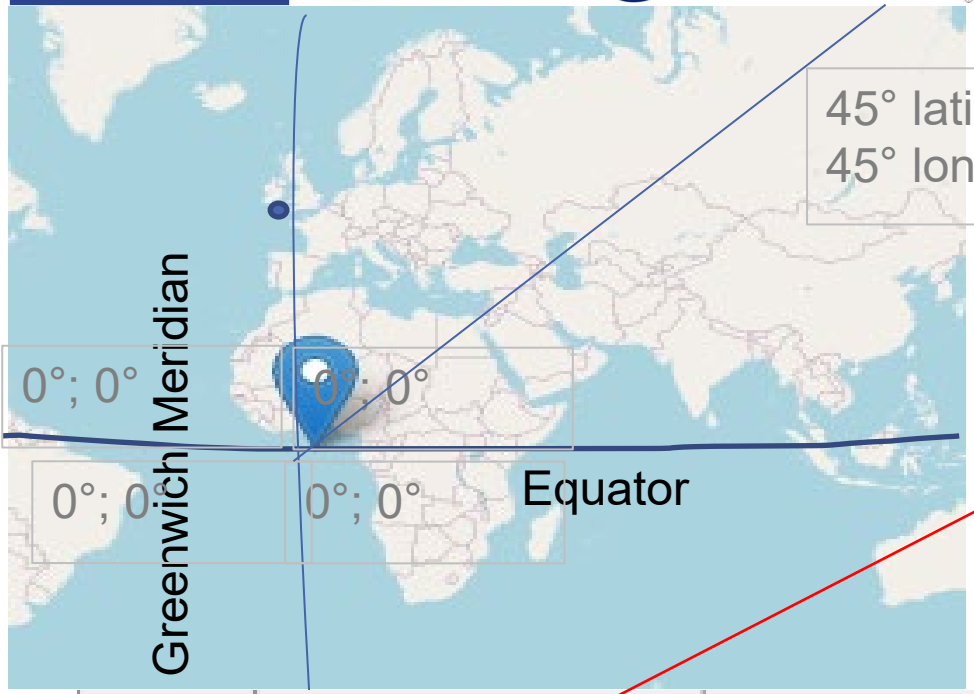
If this was P. leucophaea it would be a record because I believe the only known locations in New England occur in Maine (Mark McCollough is lead for the species in Maine). I think Molly is correct and it is probably P. lacera. See difference in lower petals between the two photos and the long green spur on P. leucophea (the one on the left). Since I have never seen the listed species, I would defer to Bill Nichols.

The FULL story
For those who enjoy getting into the weeds



https://public.tableau.com/app/profile/william.strouse/viz/Twenty-TwoWhiteOrchids/Twenty-TwoWhiteOrchids

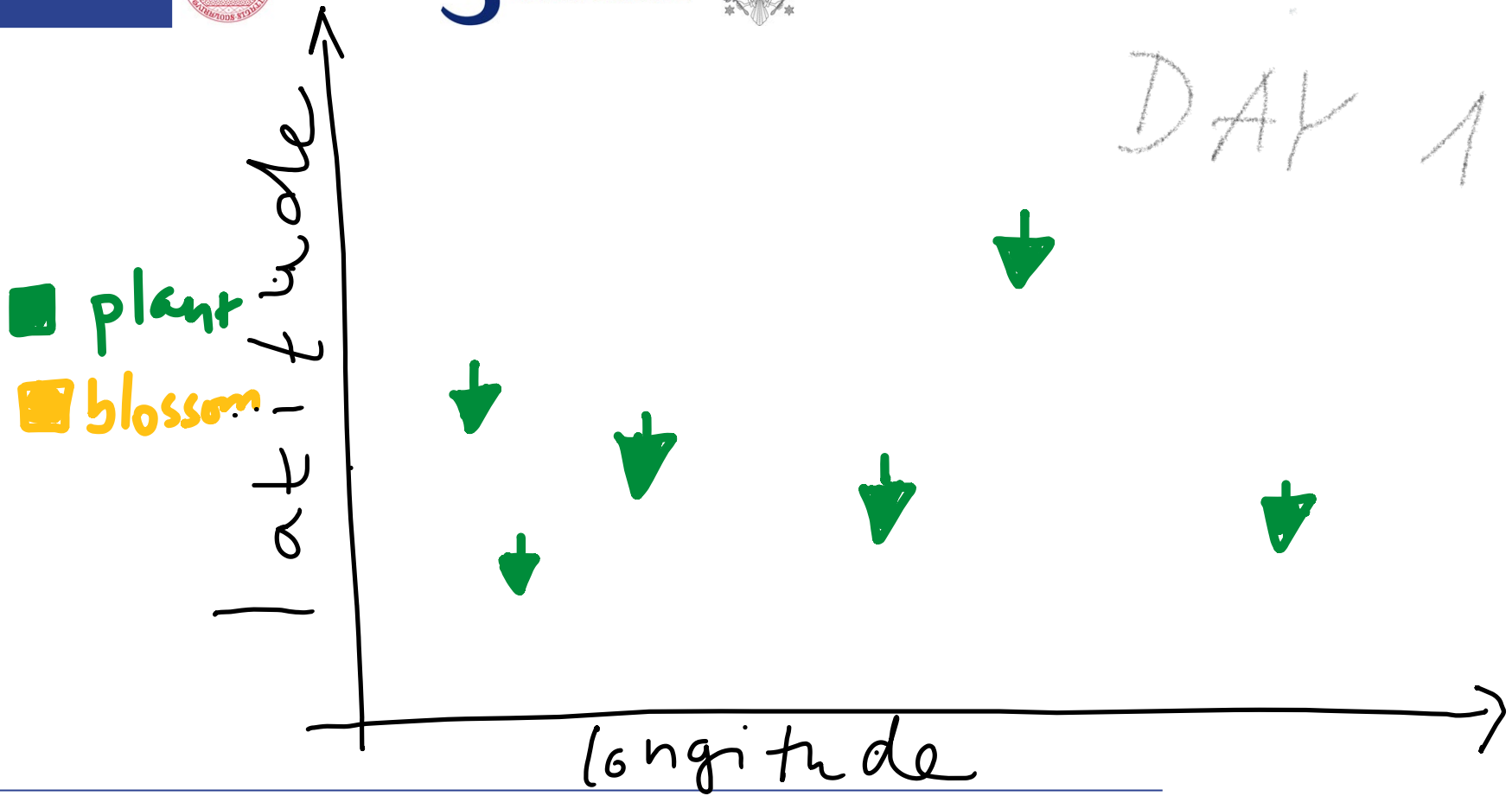

North
South
latitude
longitude
west

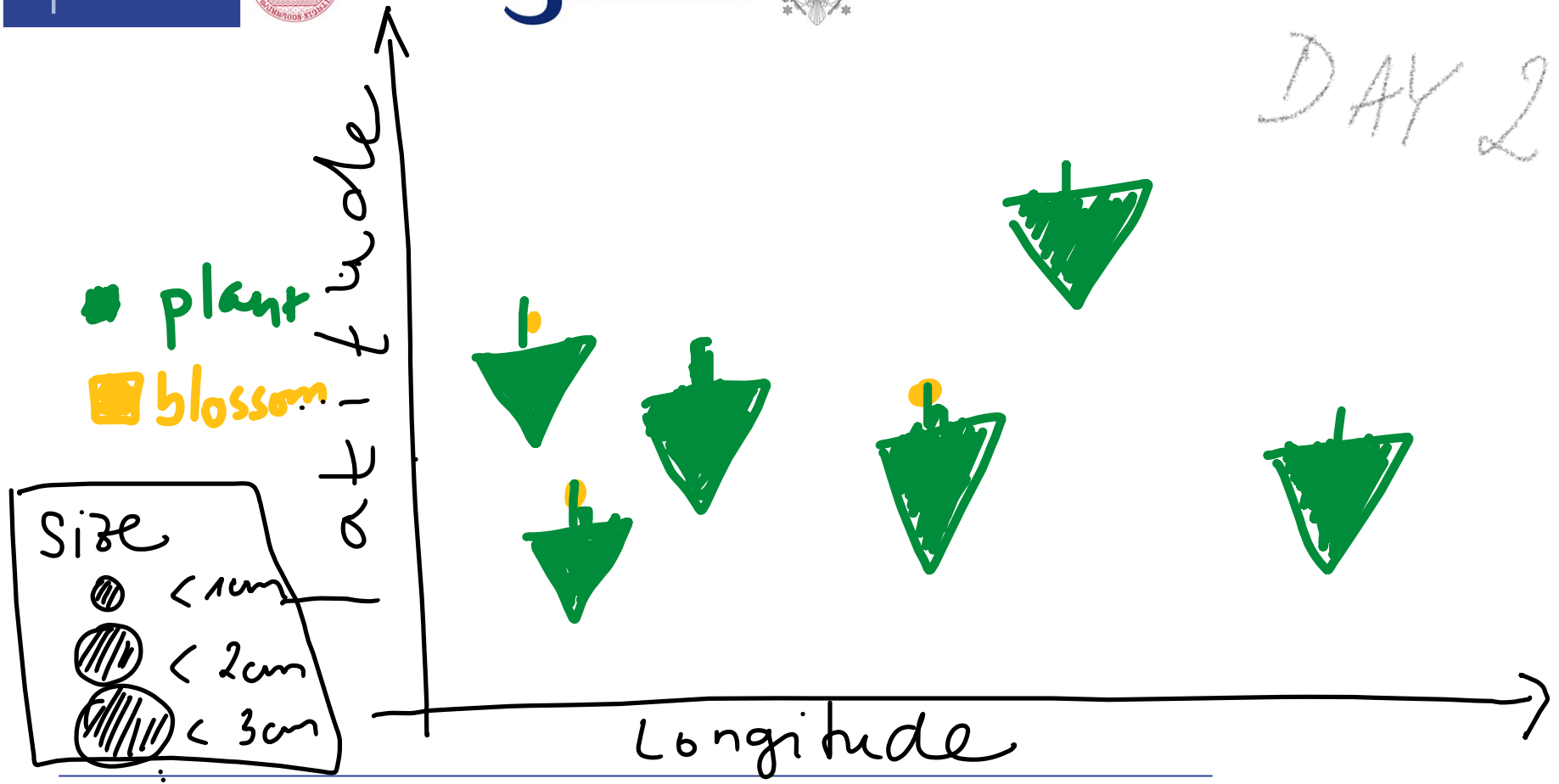


North

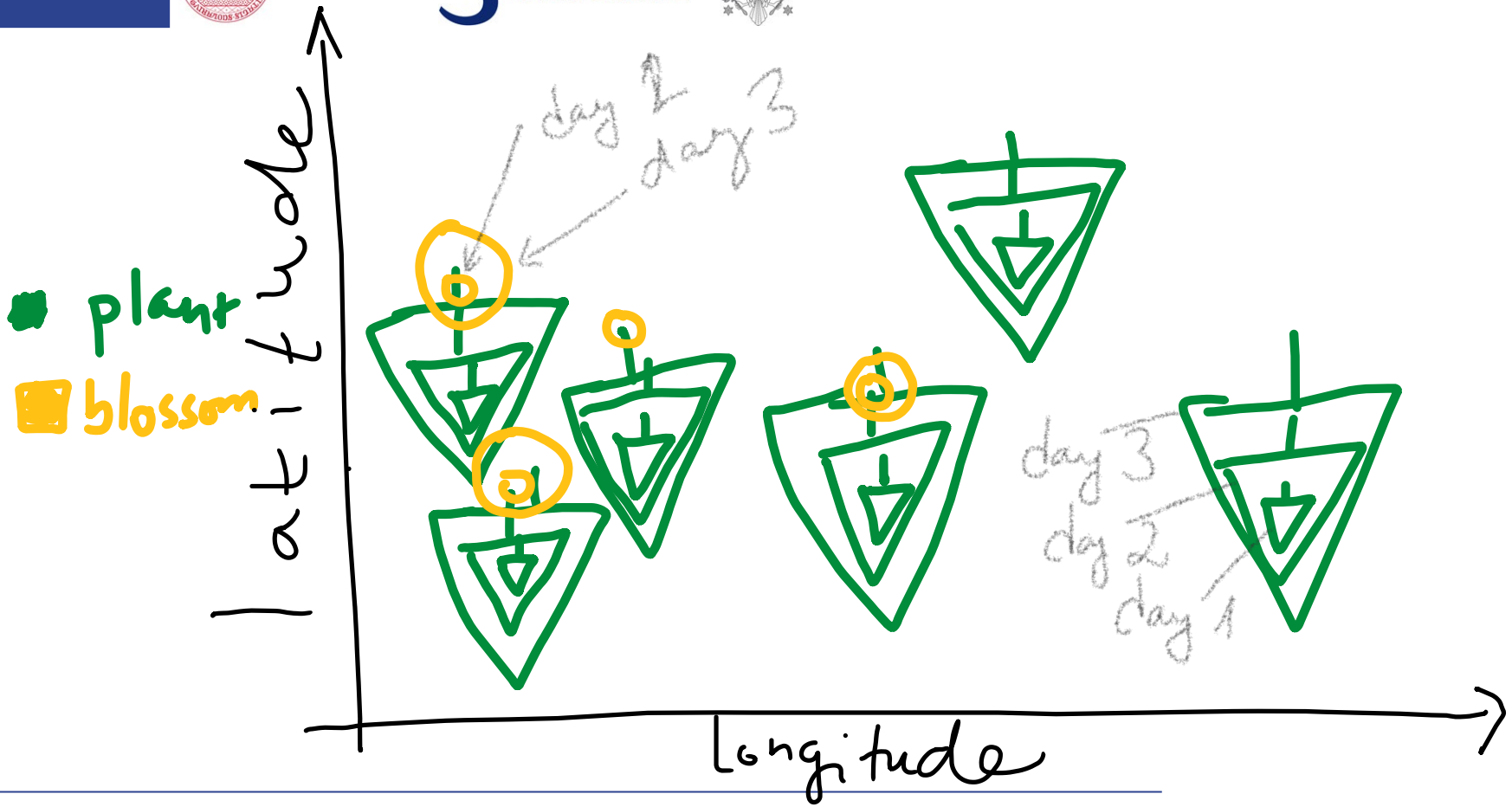
West

id	lat	long	date	size	what part
orch01	44.16931806498281	-69.61269761718752	01.03.2023	1	plant
orch02	44.26931806498281	-69.71269761718752	01.03.2023	2	plant
orch03	44.46931806498281	-69.91269761718752	01.03.2023	3	plant

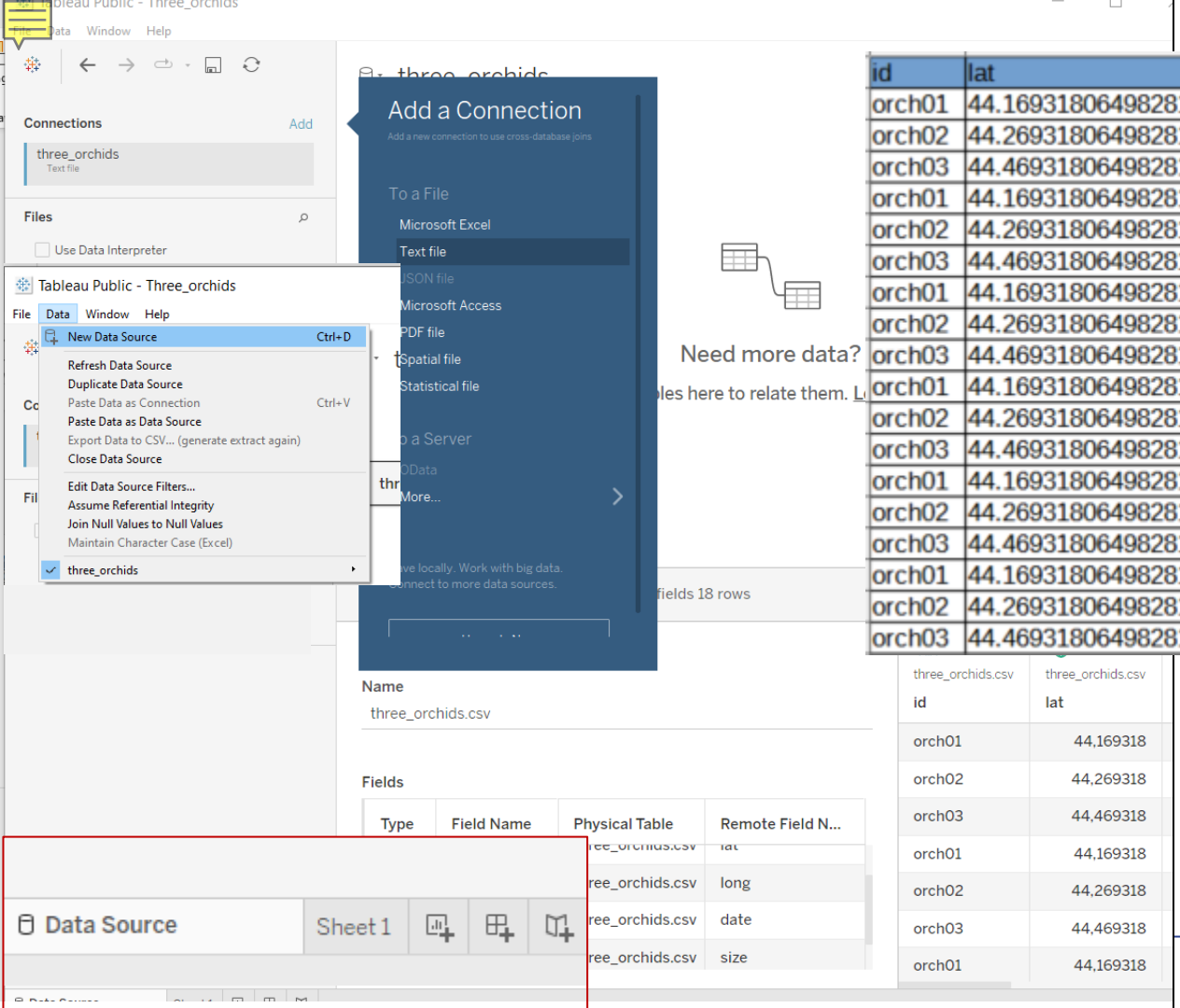

DAY 1
plant
blossom
latitude
longitude


DAY 2
plant
blossom
latitude
Size
< 1cm
< 2cm
< 3cm
Longitude


DAY 3
plant
blossom
latitude
Size
< 1cm
< 2cm
< 3cm
longitude


plant
blossom
latitude
longitude
day 2
day 3
day 3
day 2
day 1

Data input and aesthetic mapping in Tableau



id	lat	long	date	size	what part
orch01	44.16931806498281	-69.61269761718752	01.03.2023	1	plant
orch02	44.26931806498281	-69.71269761718752	01.03.2023	2	plant
orch03	44.46931806498281	-69.91269761718752	01.03.2023	3	plant
orch01	44.16931806498281	-69.61269761718752	01.03.2023	0	blossom
orch02	44.26931806498281	-69.71269761718752	01.03.2023	0	blossom
orch03	44.46931806498281	-69.91269761718752	01.03.2023	0	blossom
orch01	44.16931806498281	-69.61269761718752	02.03.2023	2	plant
orch02	44.26931806498281	-69.71269761718752	02.03.2023	3	plant
orch03	44.46931806498281	-69.91269761718752	02.03.2023	4	plant
orch01	44.16931806498281	-69.61269761718752	02.03.2023	1	blossom
orch02	44.26931806498281	-69.71269761718752	02.03.2023	2	blossom
orch03	44.46931806498281	-69.91269761718752	02.03.2023	2	blossom
orch01	44.16931806498281	-69.61269761718752	03.03.2023	4	plant
orch02	44.26931806498281	-69.71269761718752	03.03.2023	3	plant
orch03	44.46931806498281	-69.91269761718752	03.03.2023	4	plant
orch01	44.16931806498281	-69.61269761718752	03.03.2023	2	blossom
orch02	44.26931806498281	-69.71269761718752	03.03.2023	4	blossom
orch03	44.46931806498281	-69.91269761718752	03.03.2023	3	blossom

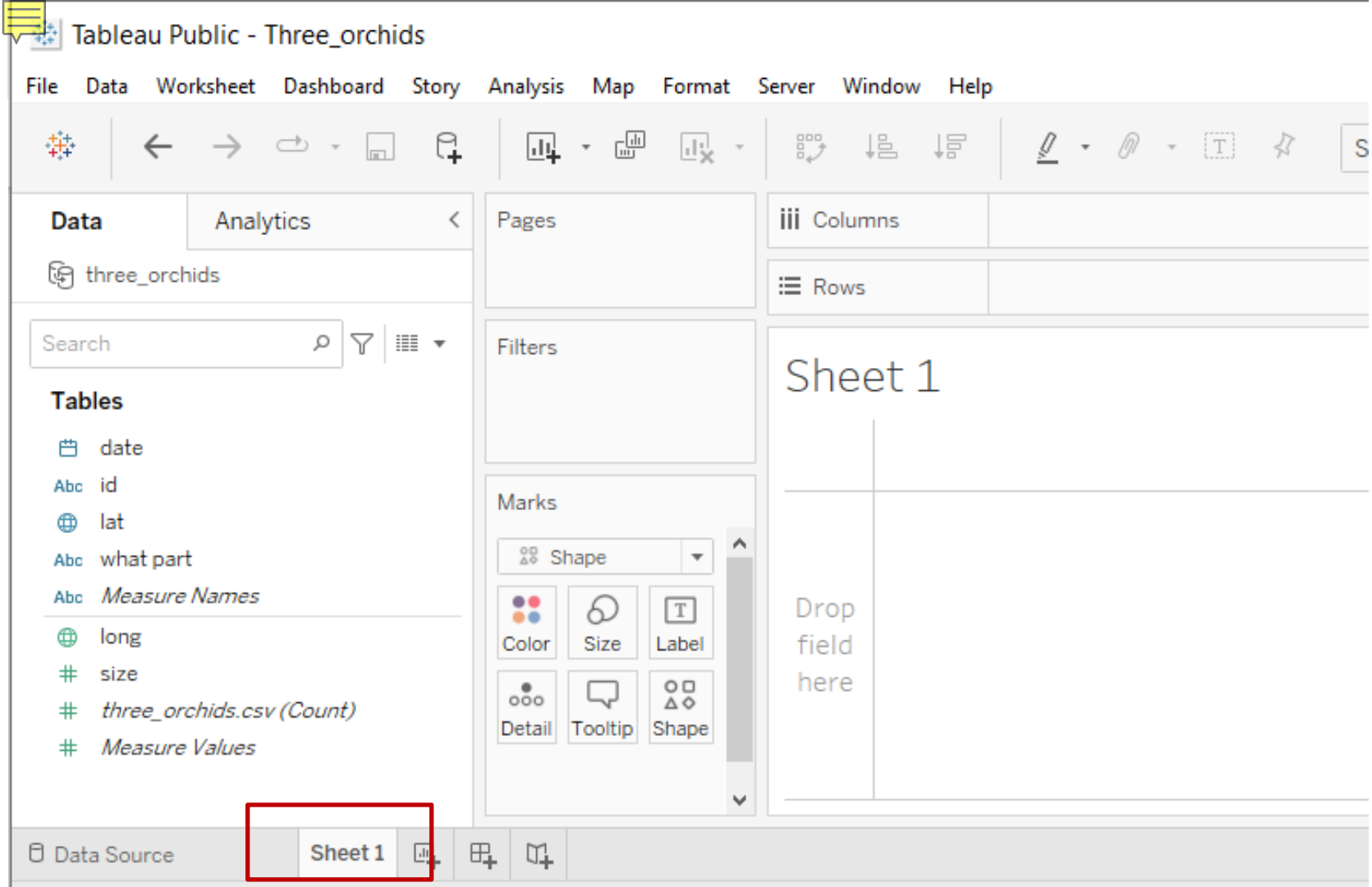


Tableau Public - Three_orchids
File Data Worksheet Dashboard Story Analysis Map Format Server Window Help
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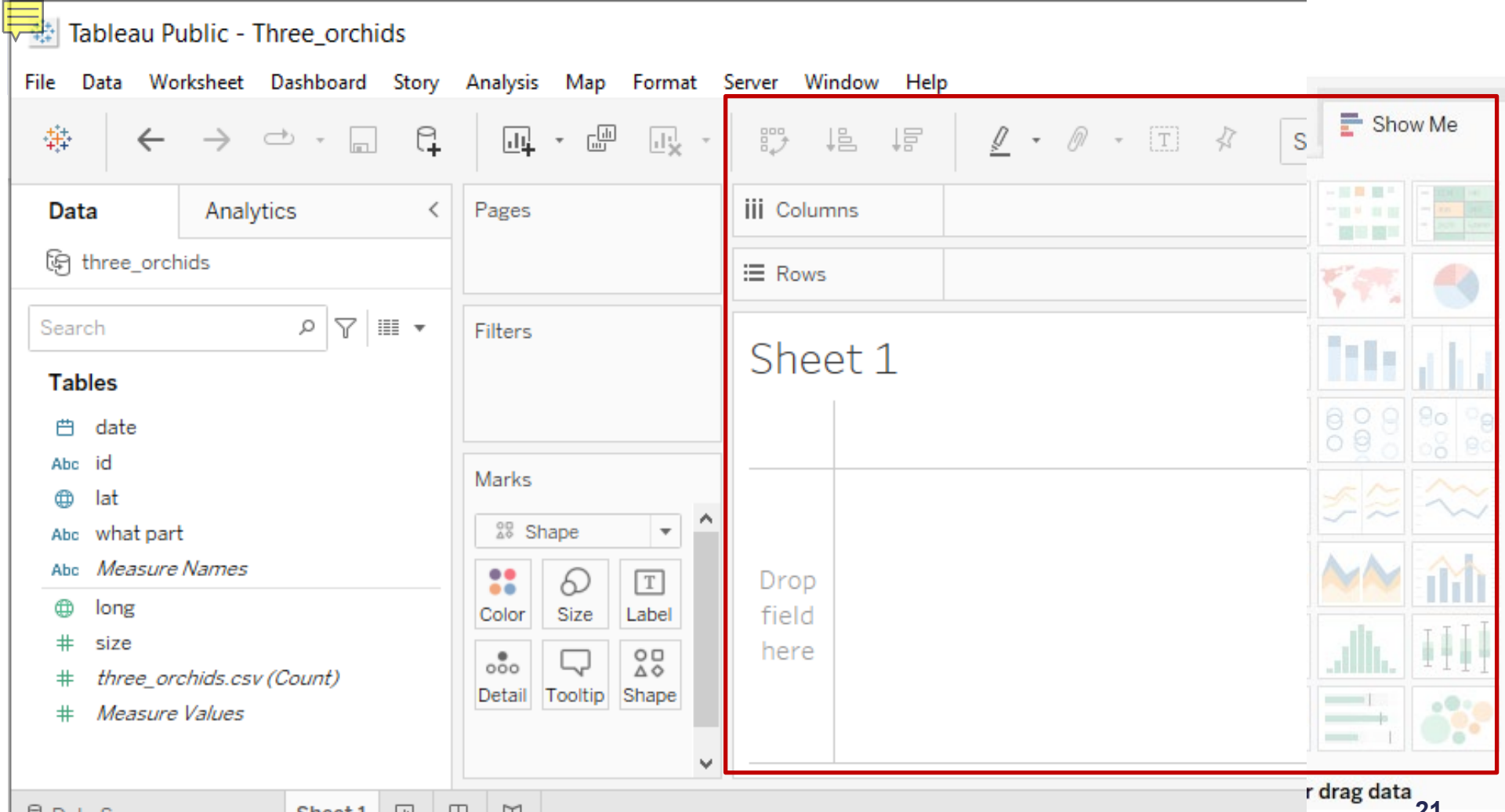
Data Source
Sheet 1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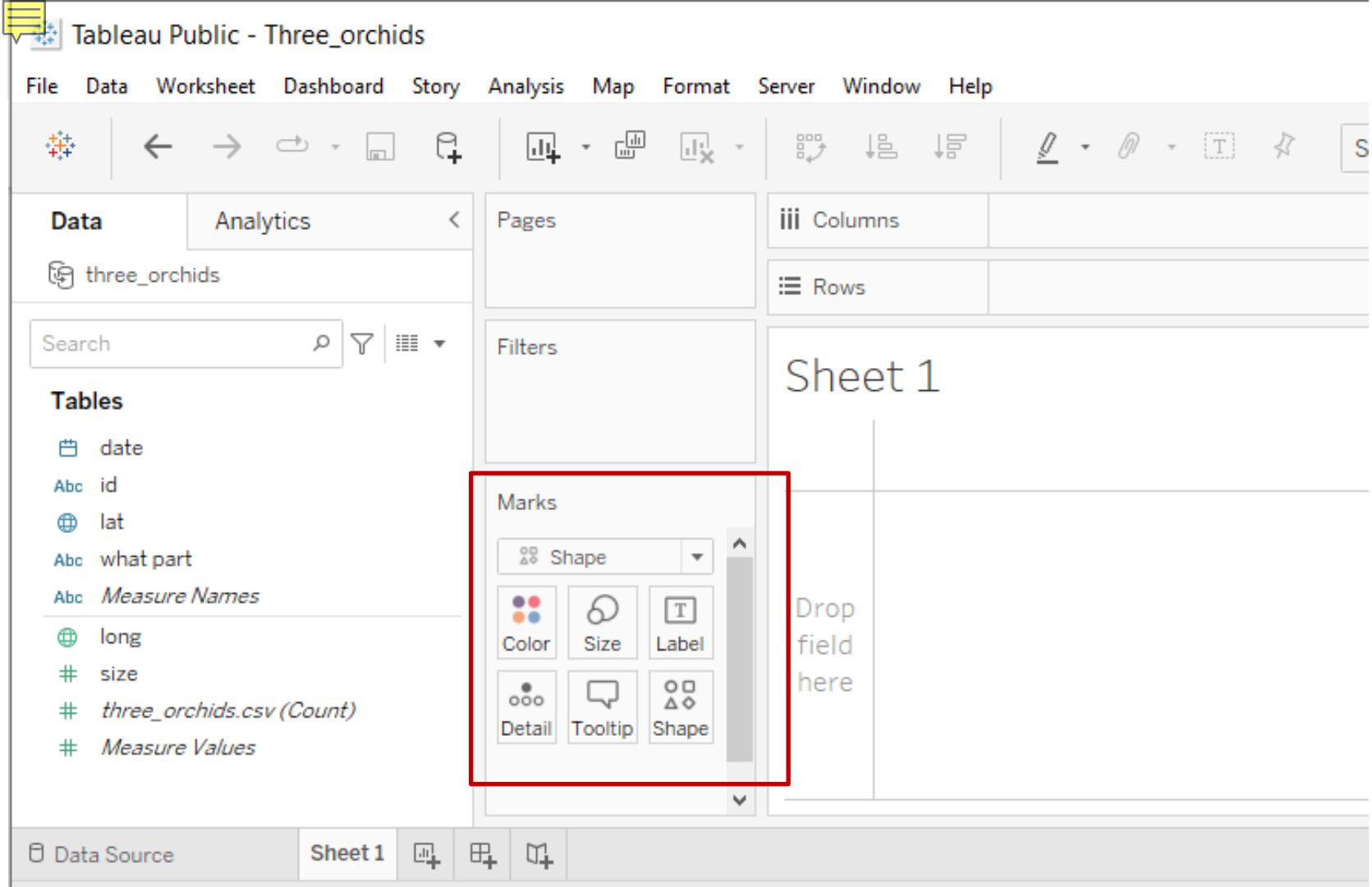
r drag data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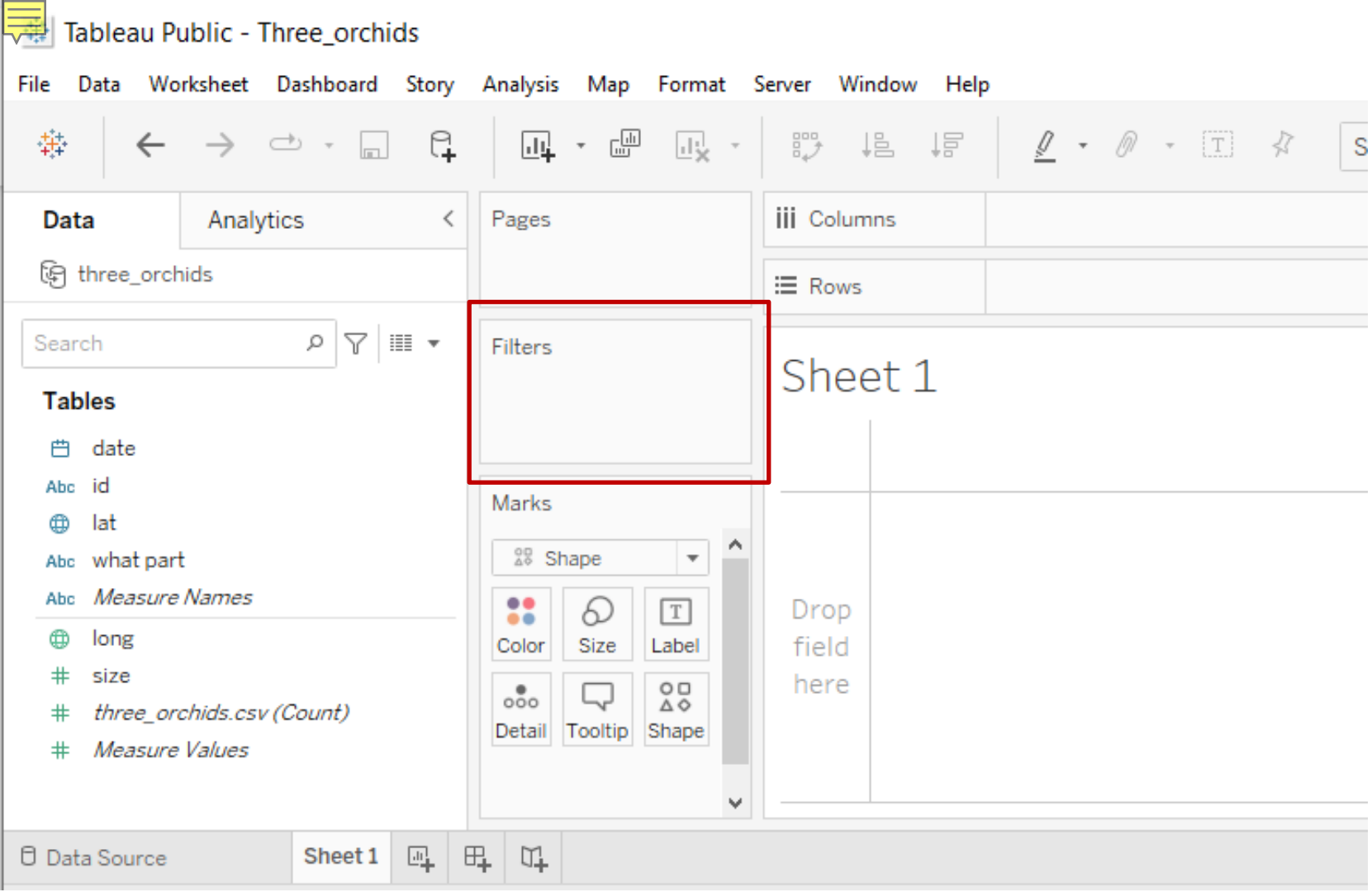
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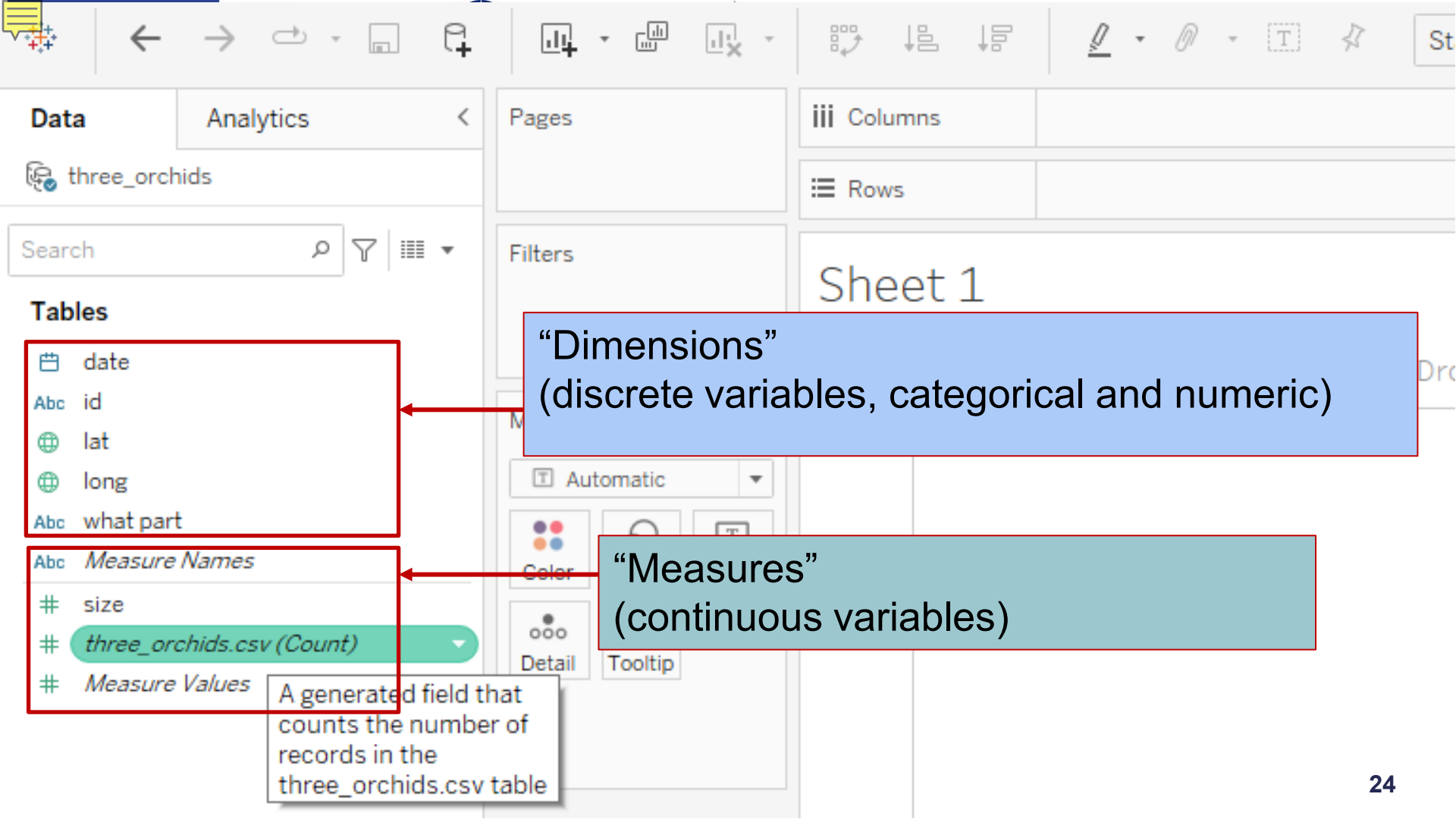
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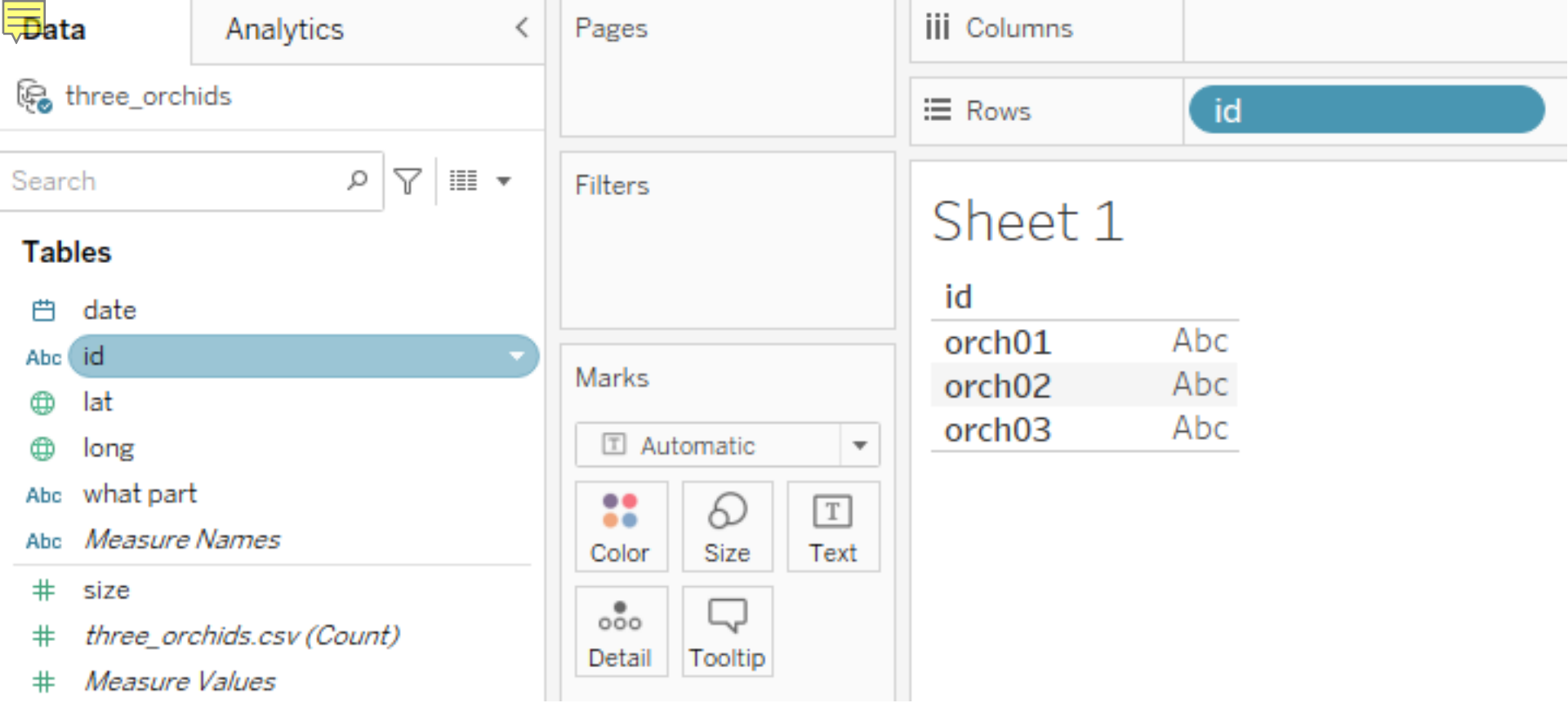
Color
Detail
Tooltip
“Dimensions”
(discrete variables, categorical and numeric)
“Measures”
(continuous variables)
A generated field that counts the number of records in the three_orchids.csv table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Sheet 1
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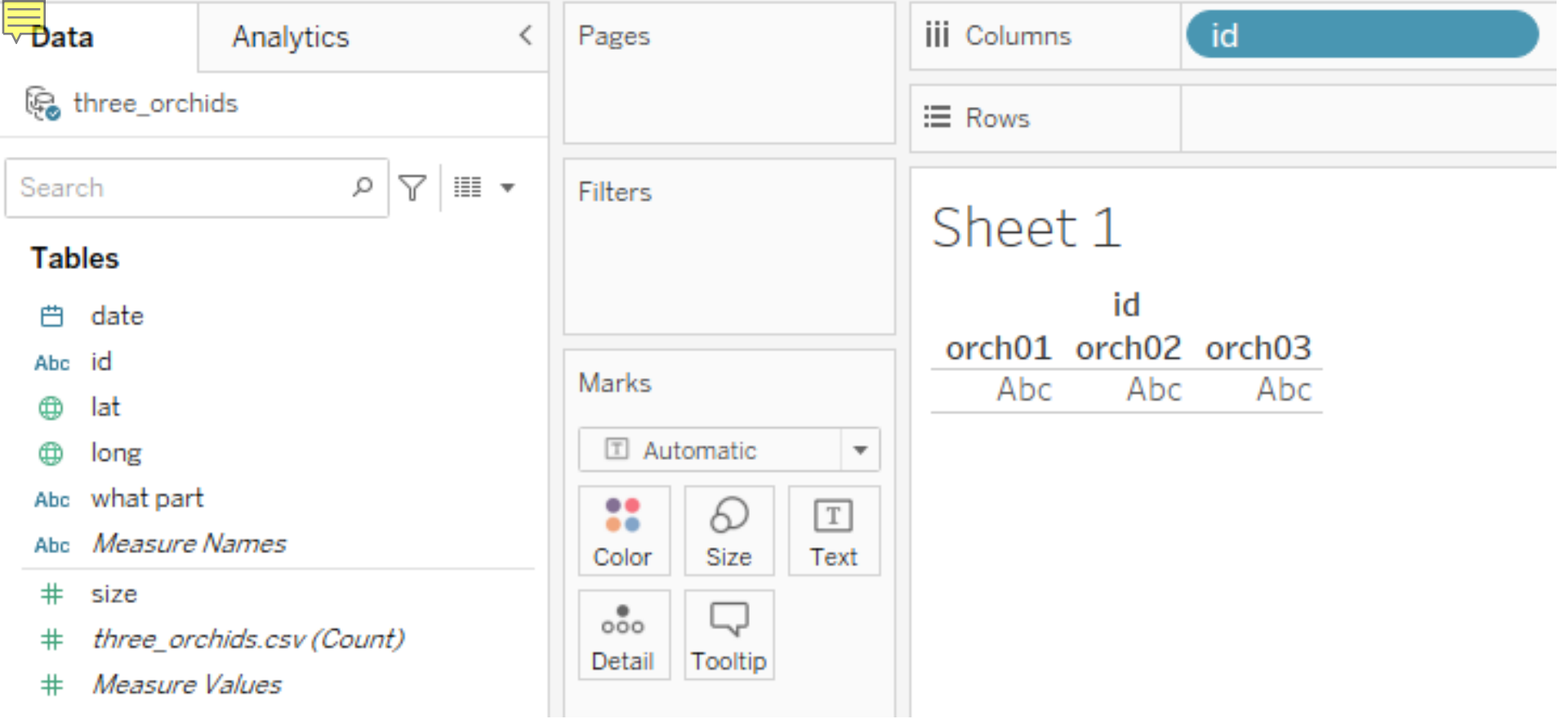
orch01 Abc
orch02 Abc
orch03 Abc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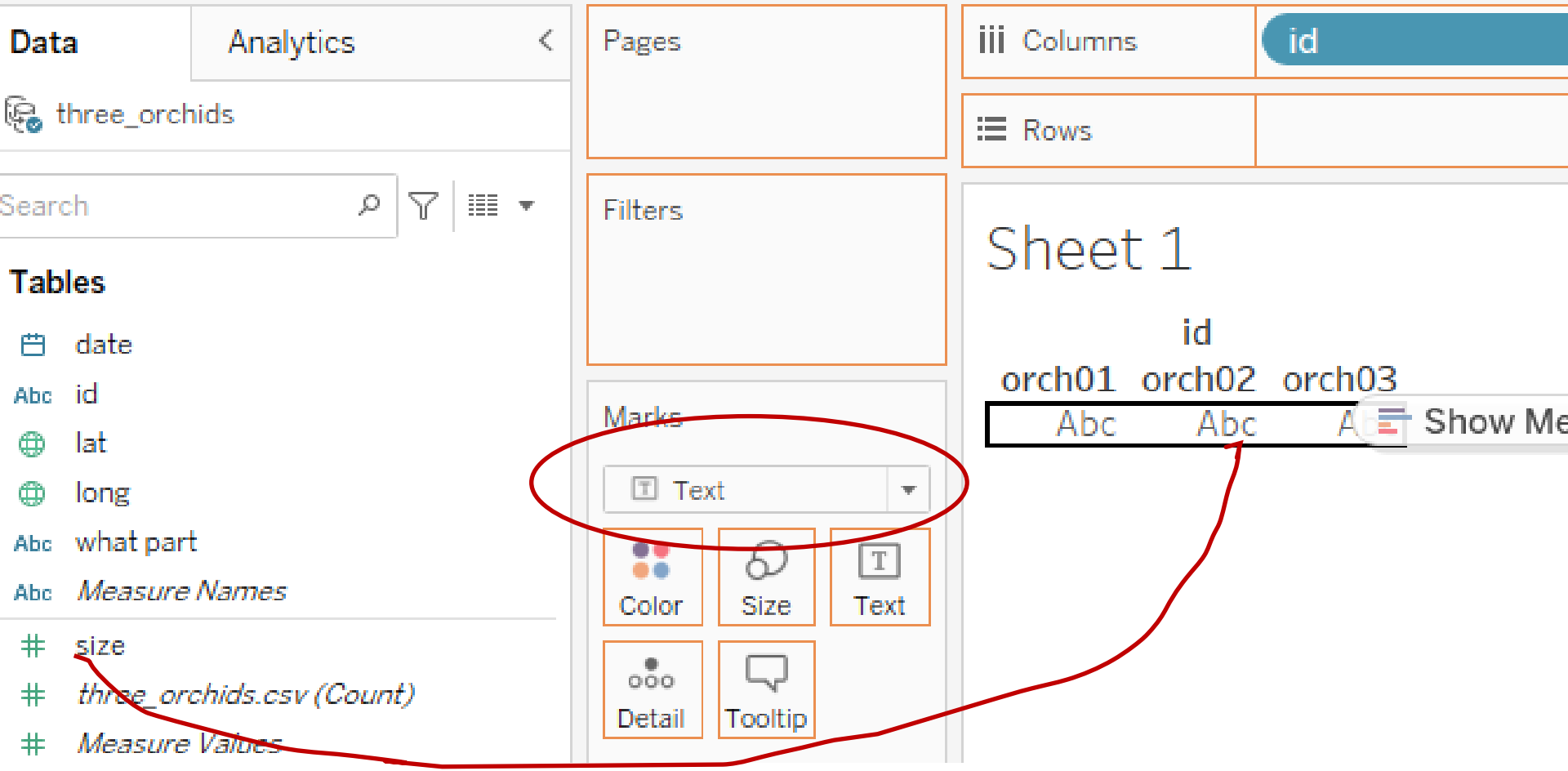
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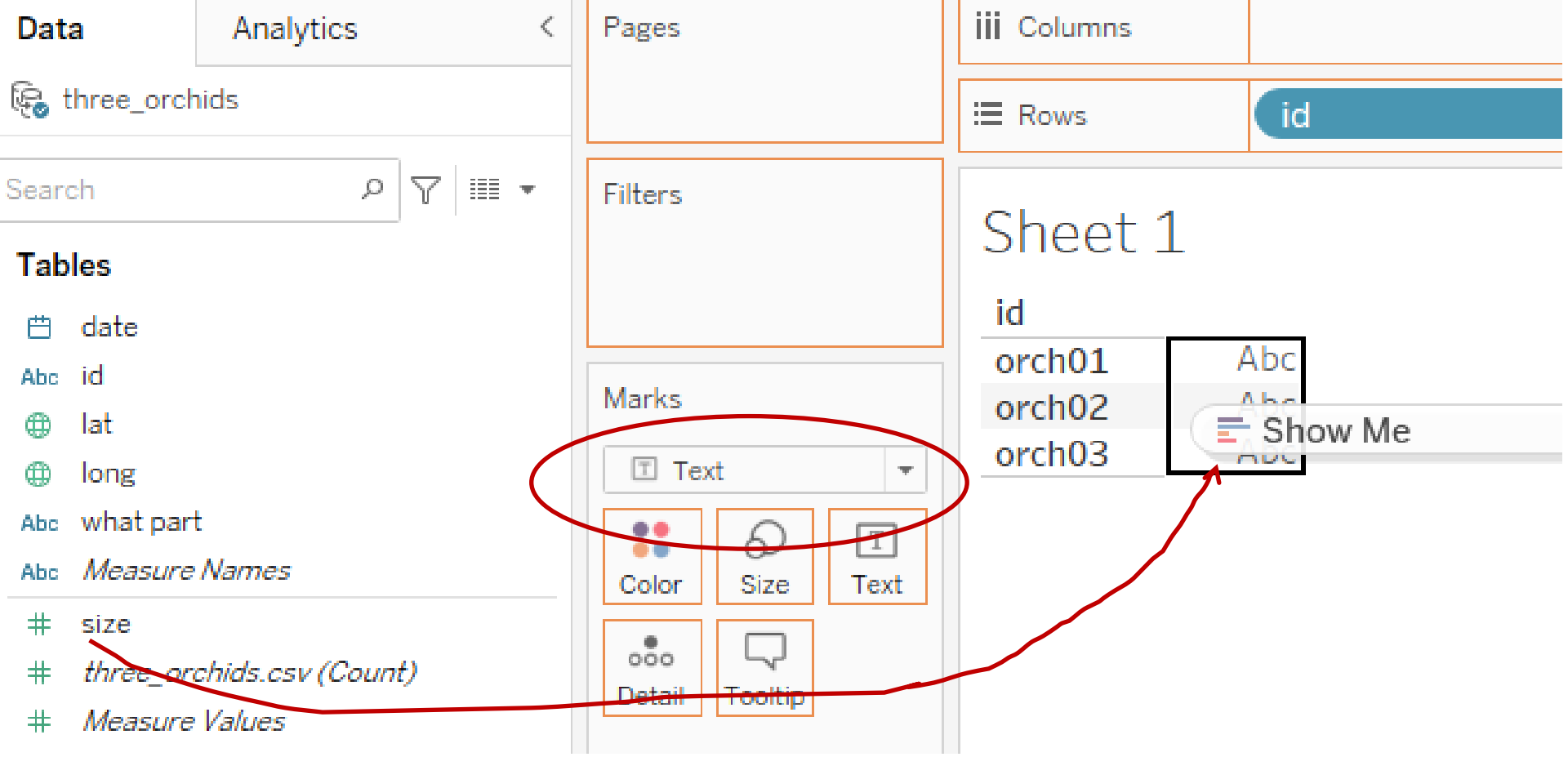
orch02
orch03
Abc
Abc
Show Me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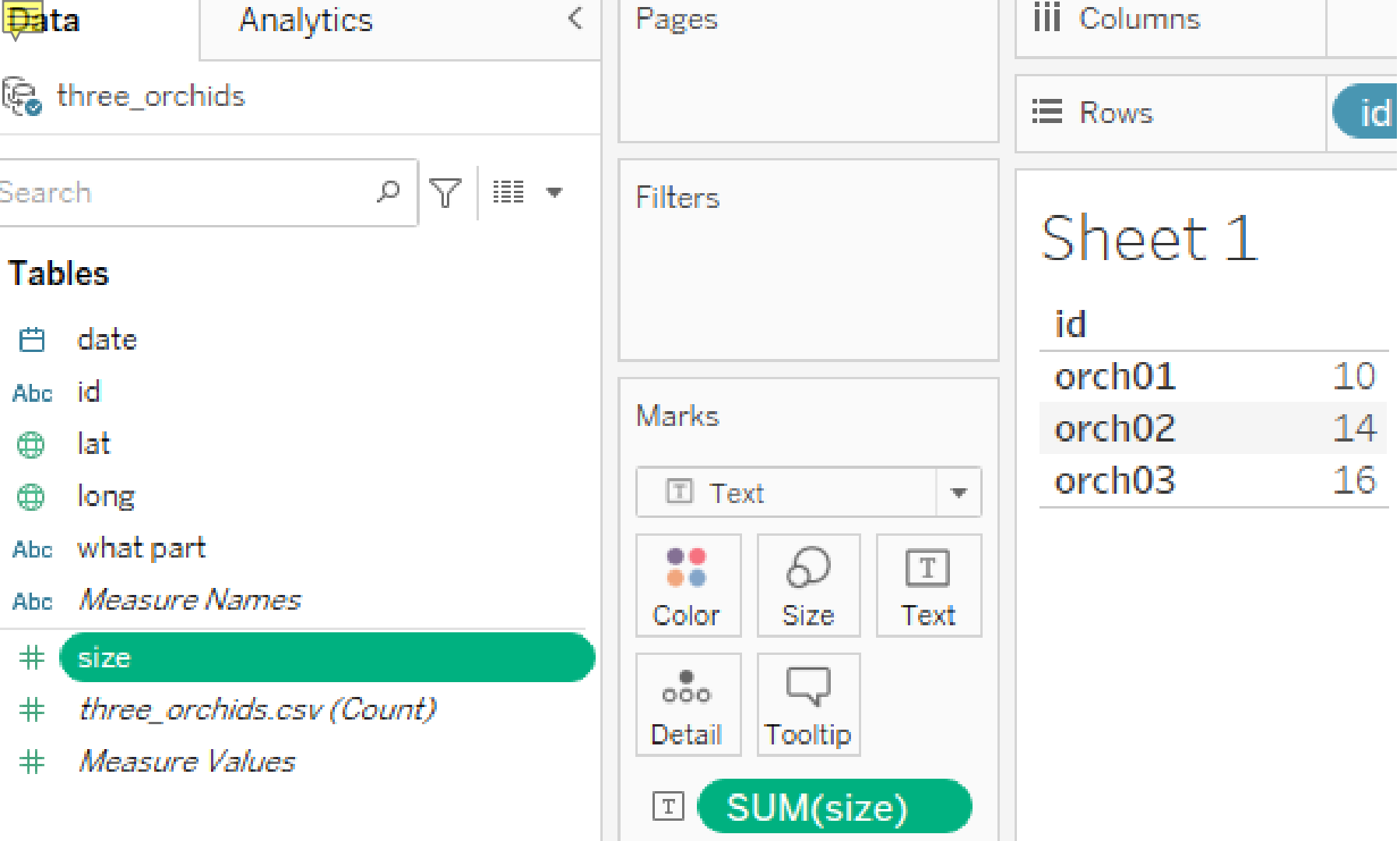
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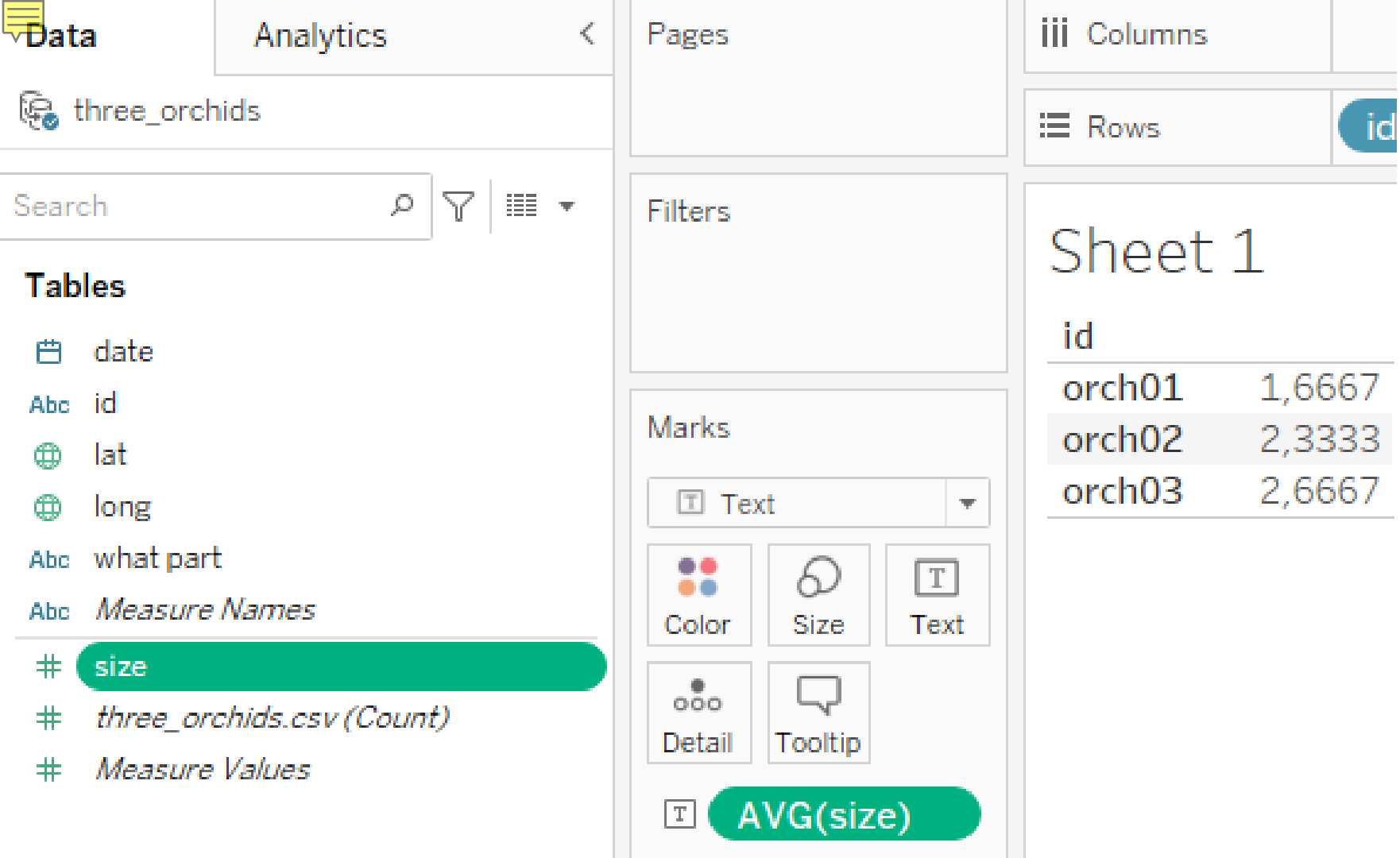
orch02 14
orch03 16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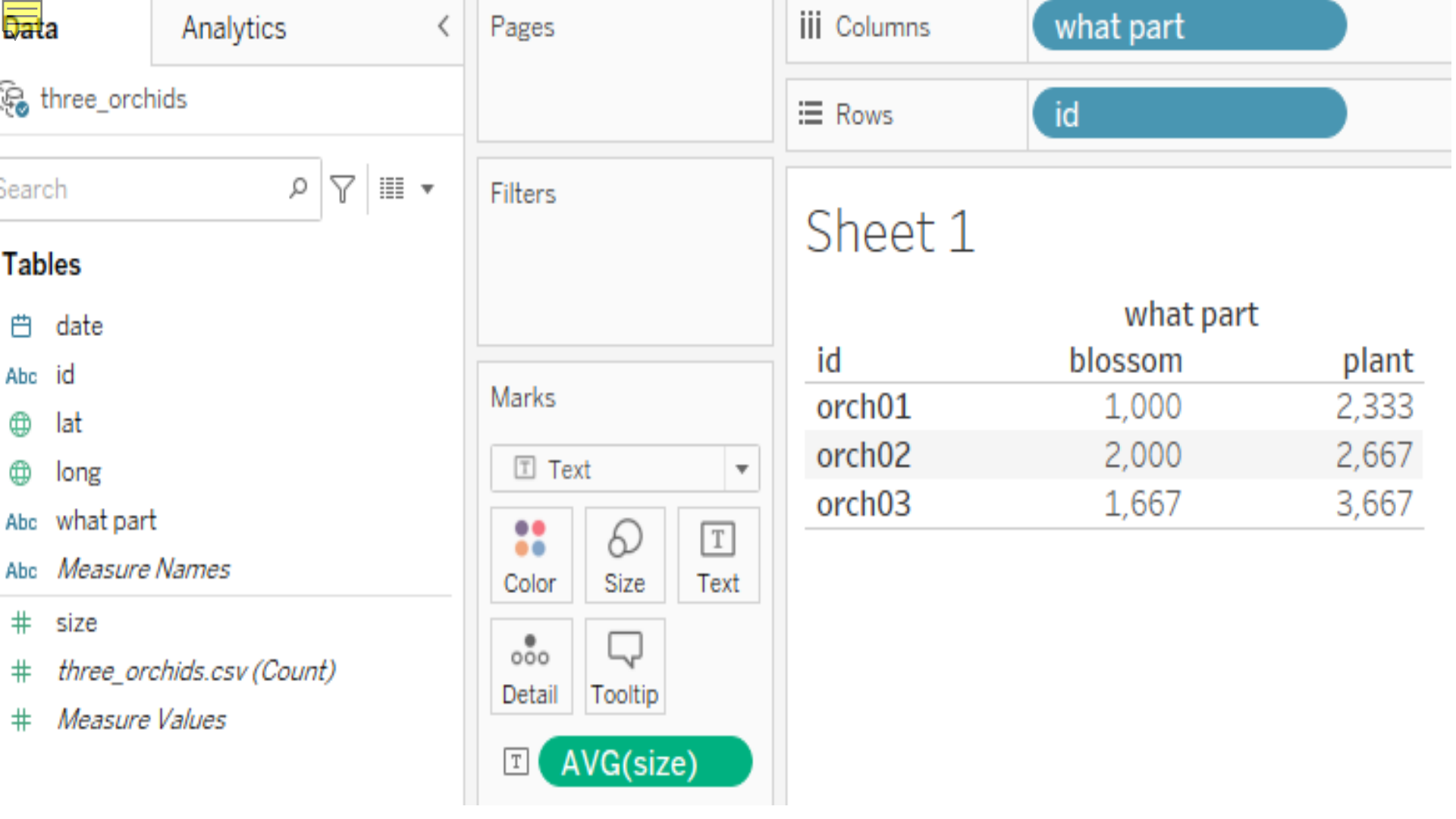
orch01 1,6667
orch02 2,3333
orch03 2,6667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orch02
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orch03
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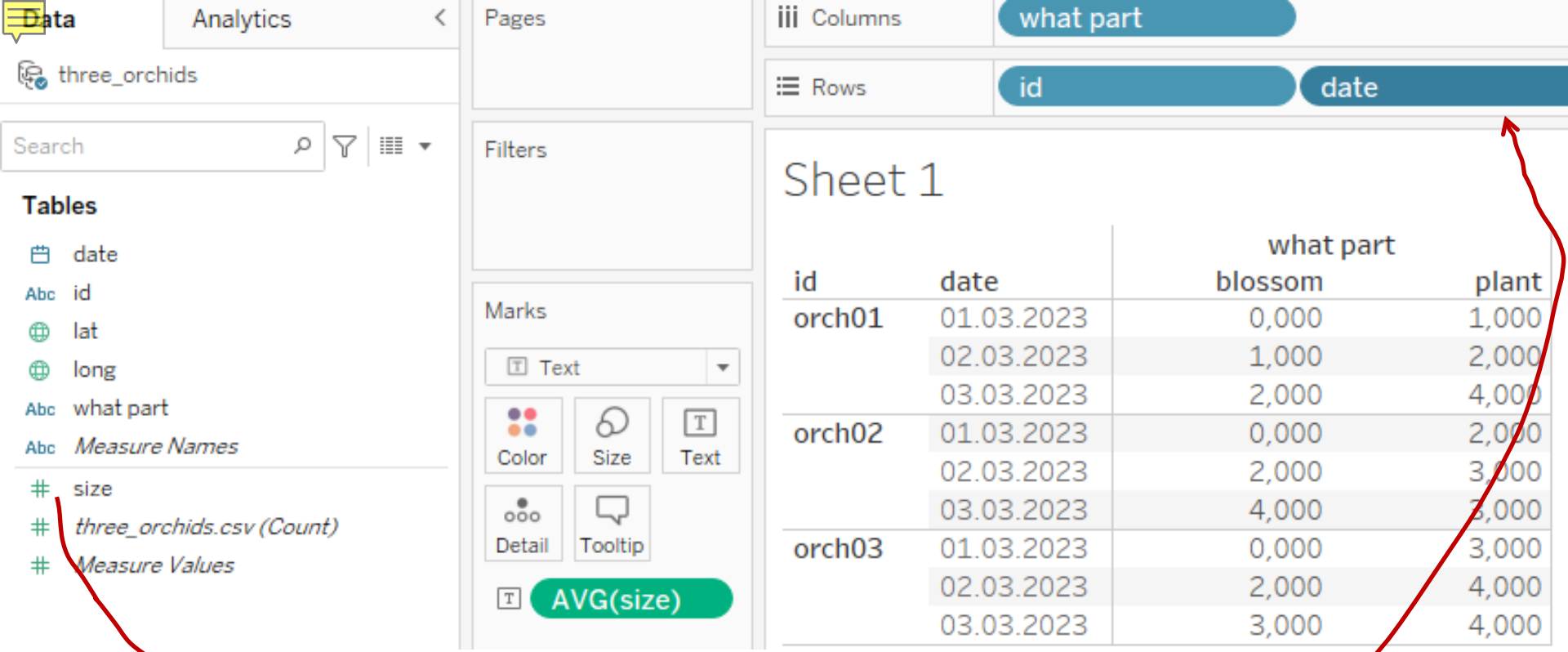
3,667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AVG(size)
Columns
what part
Rows
id
date
Sheet 1
what part
id
date
blossom
plant
orch01
01.03.2023
0,000
1,000
02.03.2023
1,000
2,000
03.03.2023
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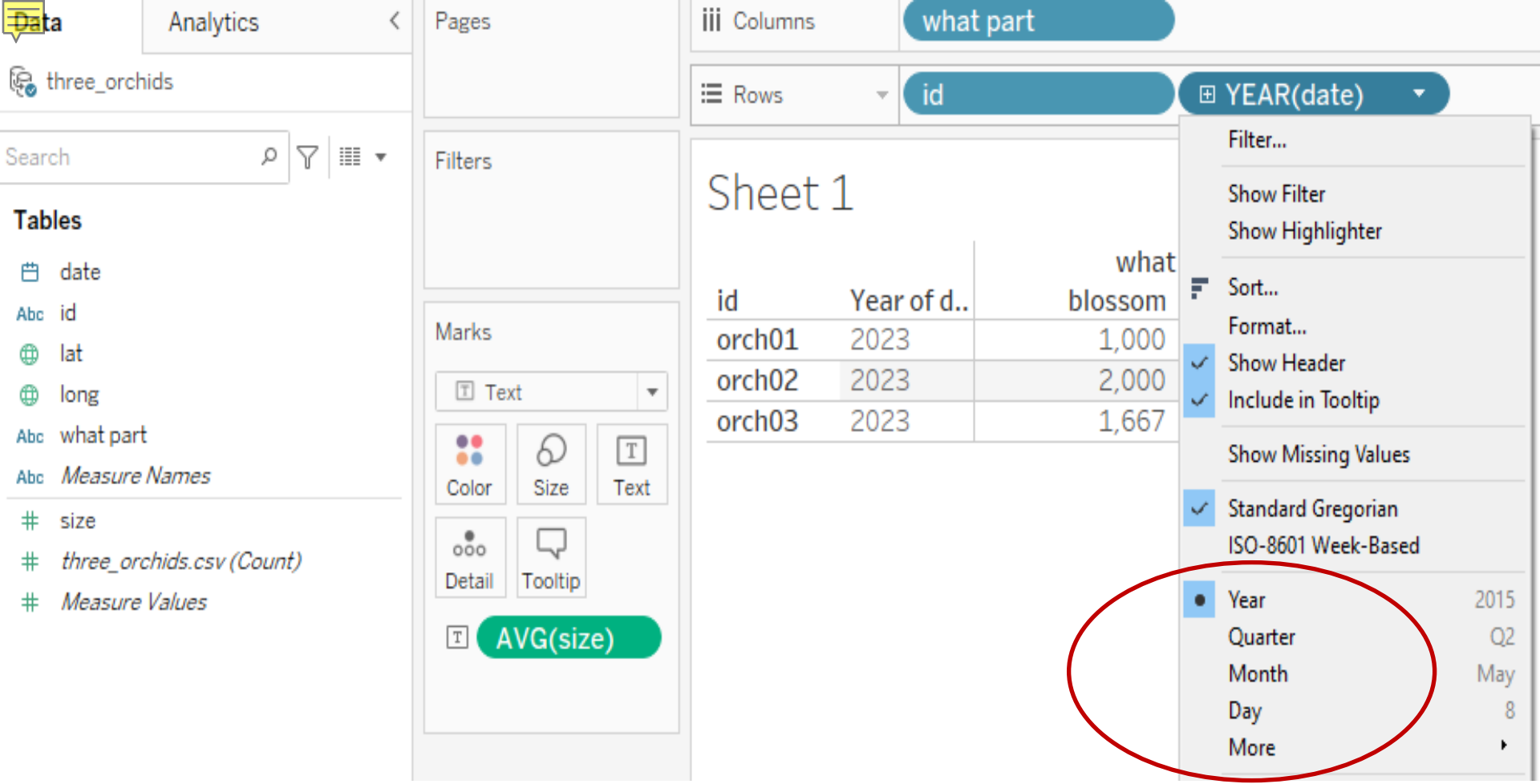
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orch01
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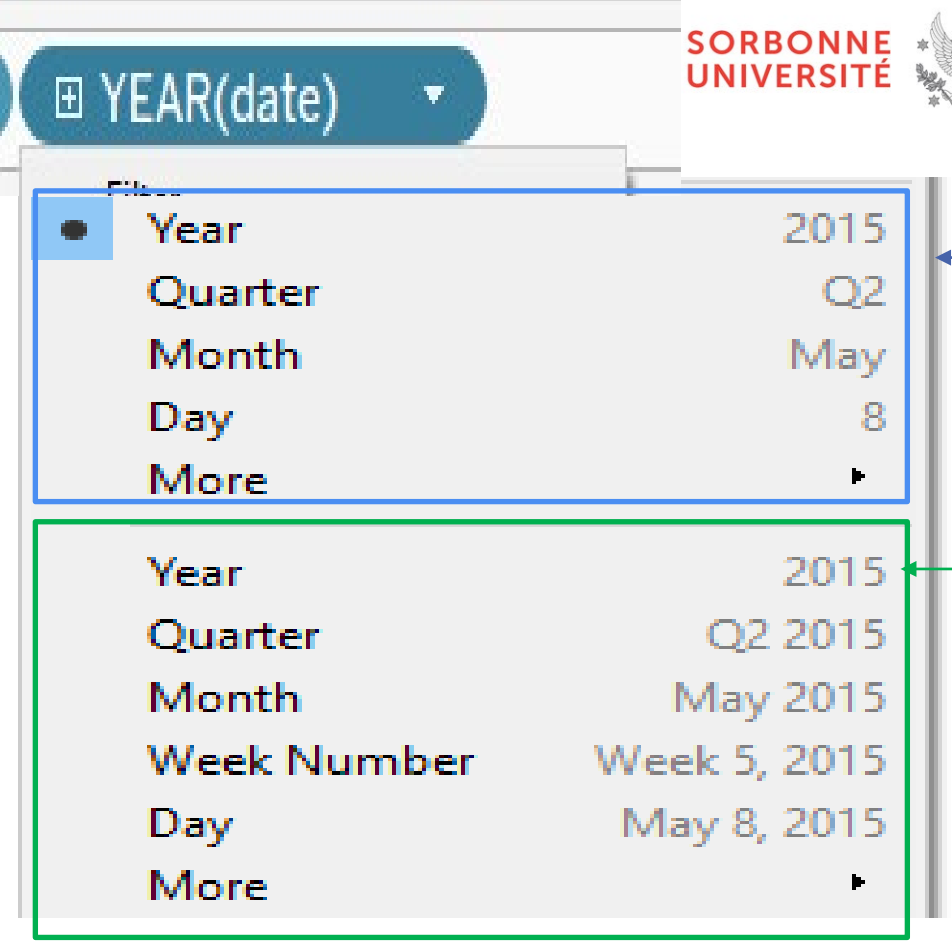
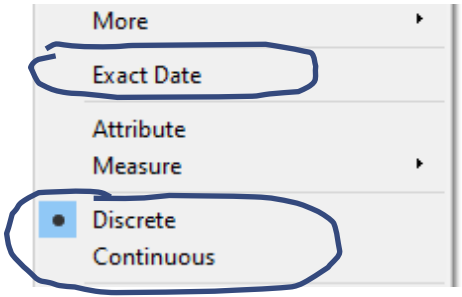
orch02
2023
2,000
orch03
2023
1,667
Filter...
Show Filter
Show Highlighter
Sort...
Format...
Show Header
Include in Tooltip
Show Missing Values
Standard Gregorian
ISO-8601 Week-Based
Year 2015
Quarter Q2
Month May
Day 8
More



as Dimension (categorical):
e. g. all Sundays get added across months and years
(“How much do you sell on Sundays on average?”)

as Measure (continuous variable)
(“How much have you sold per month in the past two years?”)



Even exact dates can be categorical

Pages

Columns | AVG(size)

Rows | id | what part

Filters

Marks

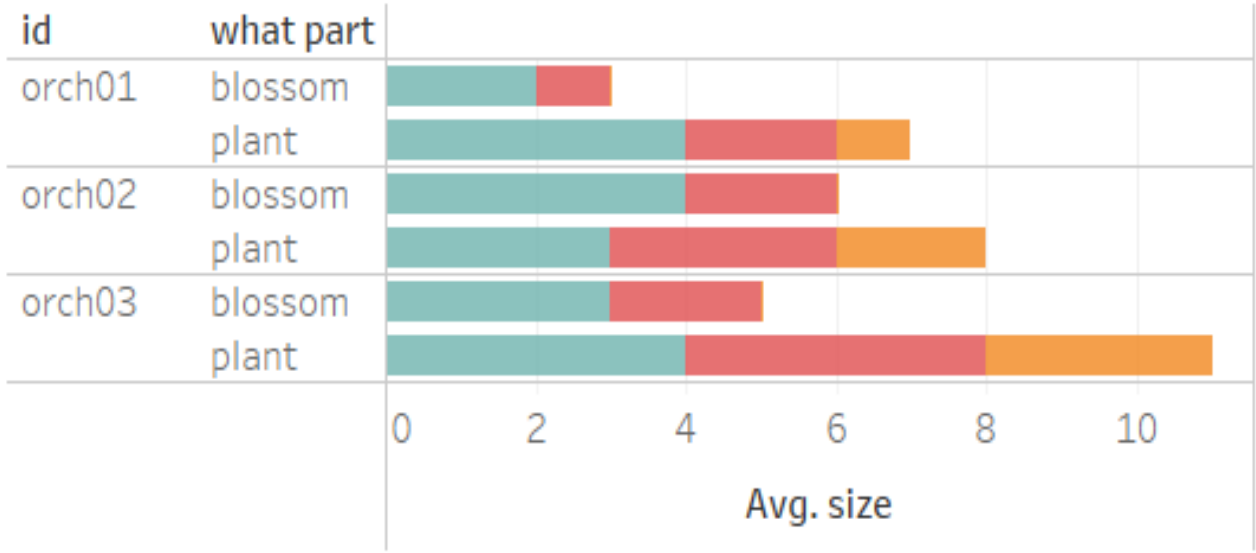
Bar

Color | Size | Label

Detail | Tooltip

DAY(date)

Sheet 1

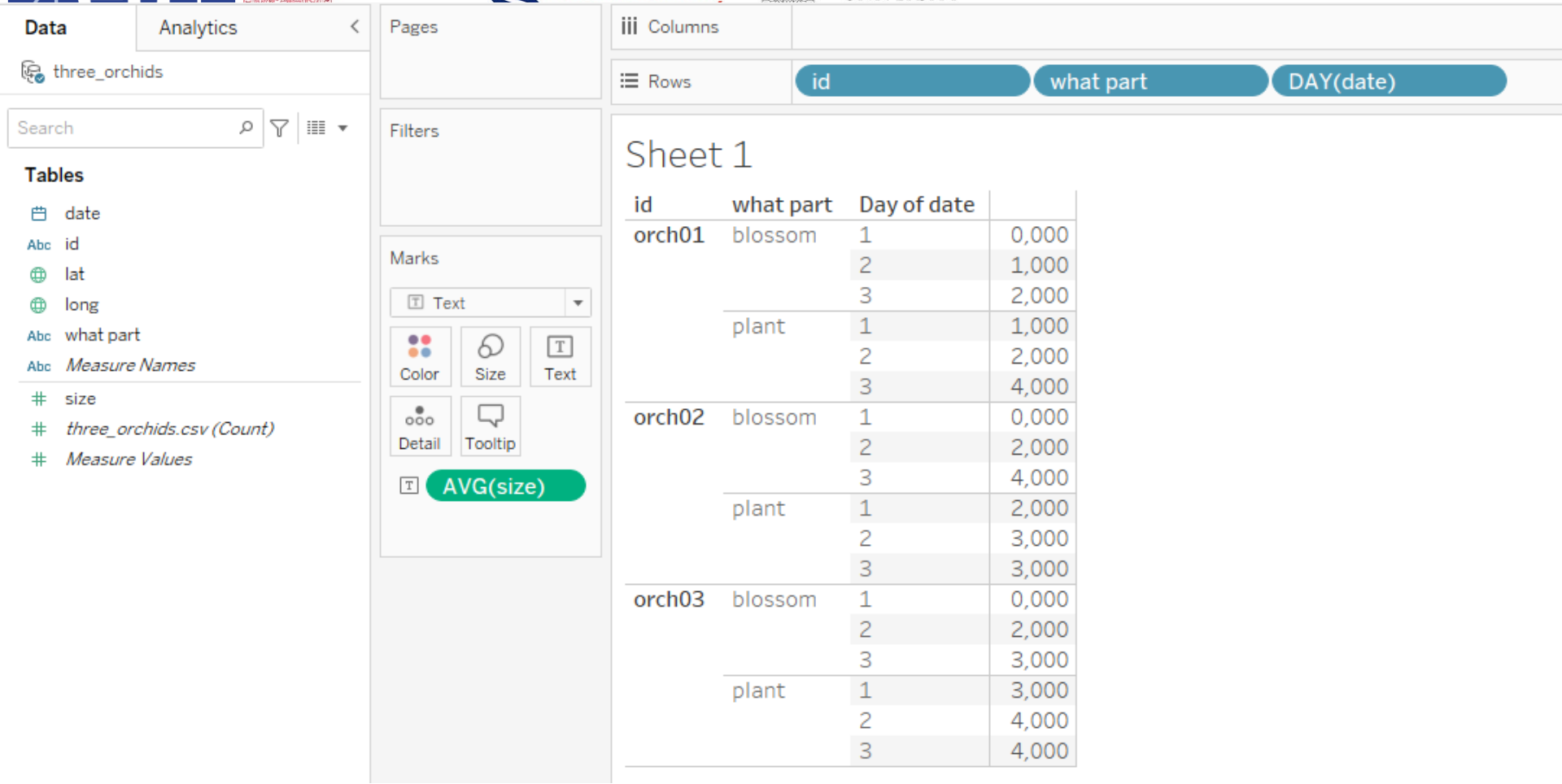


DAY(date)

1

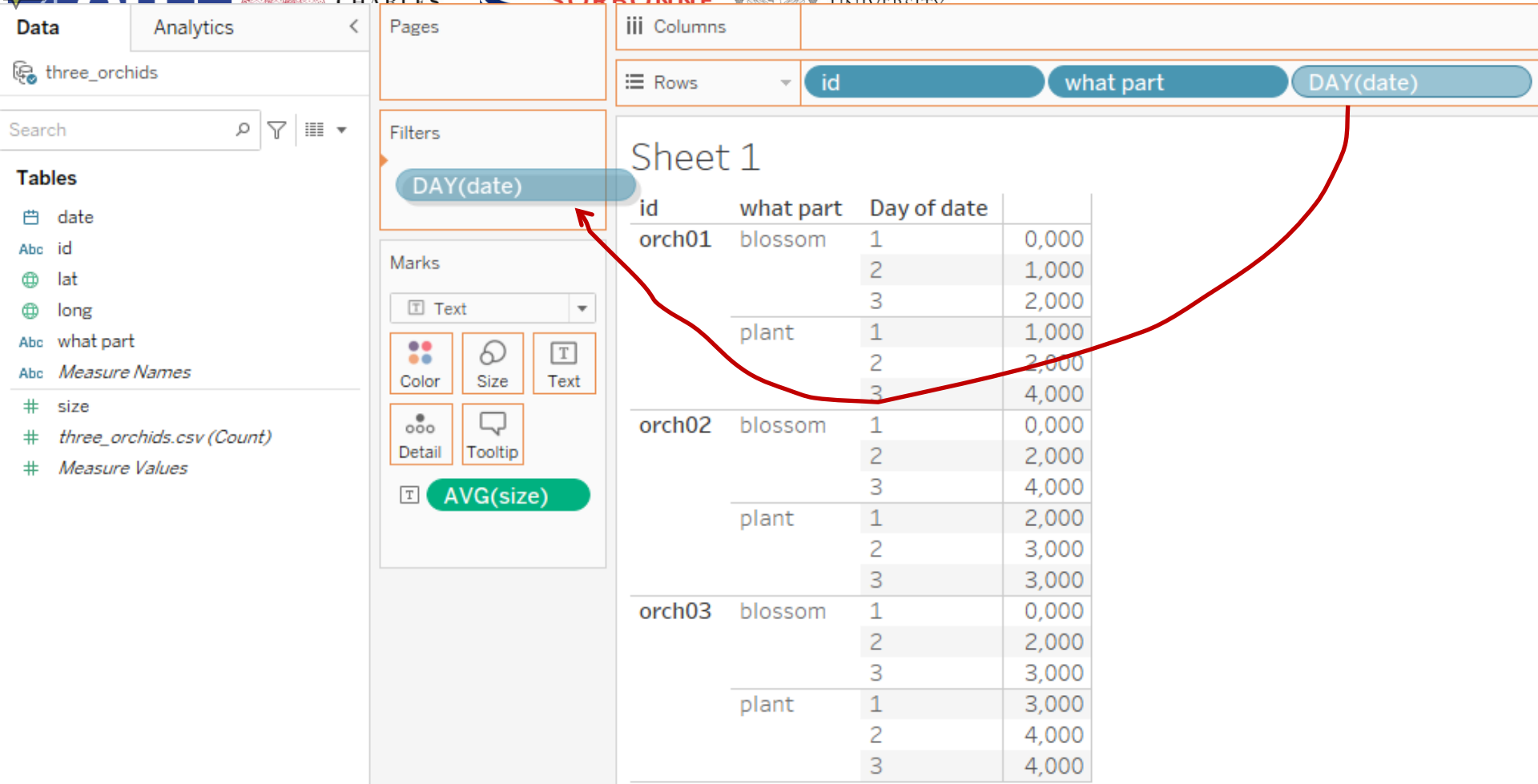
2

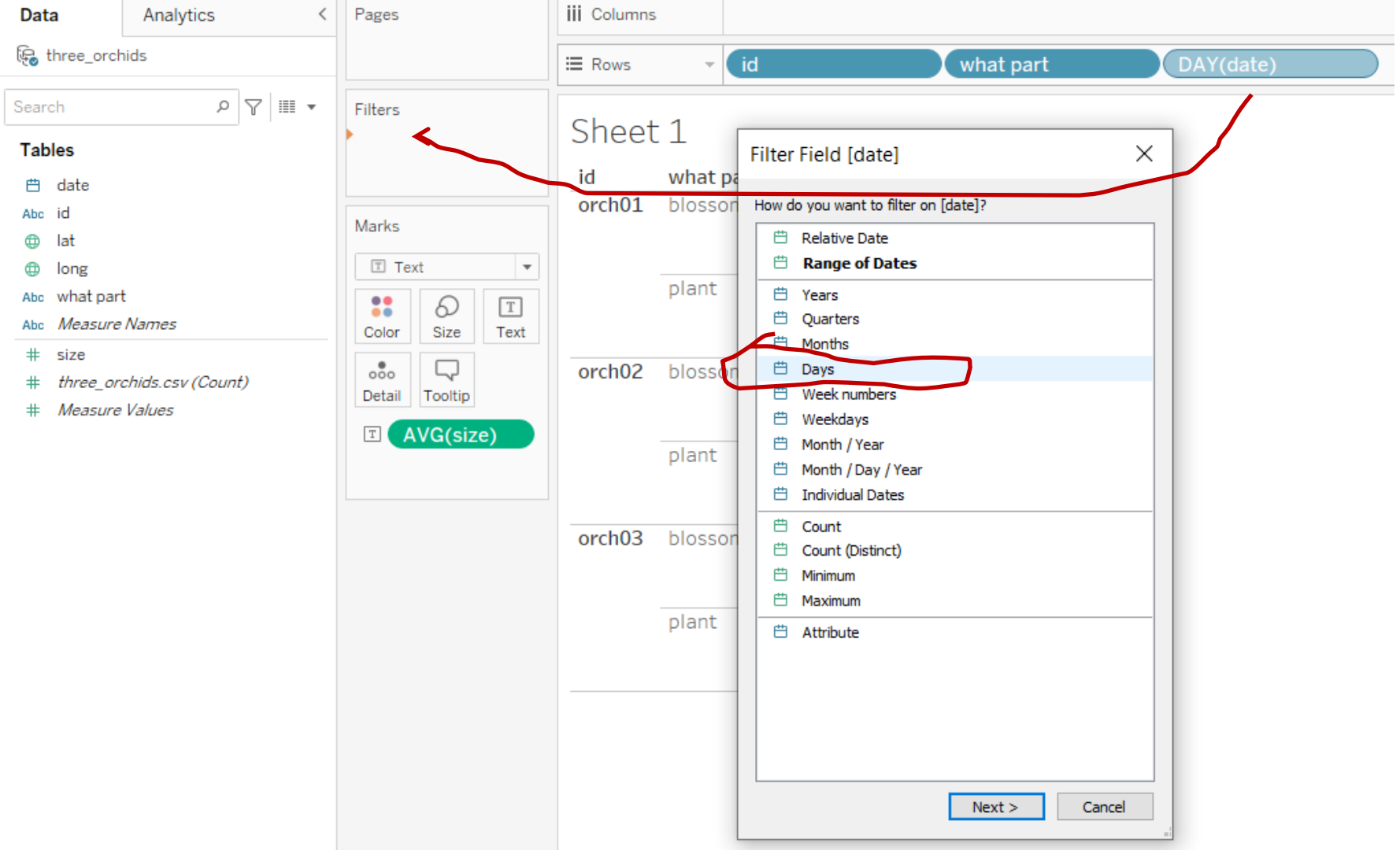
3

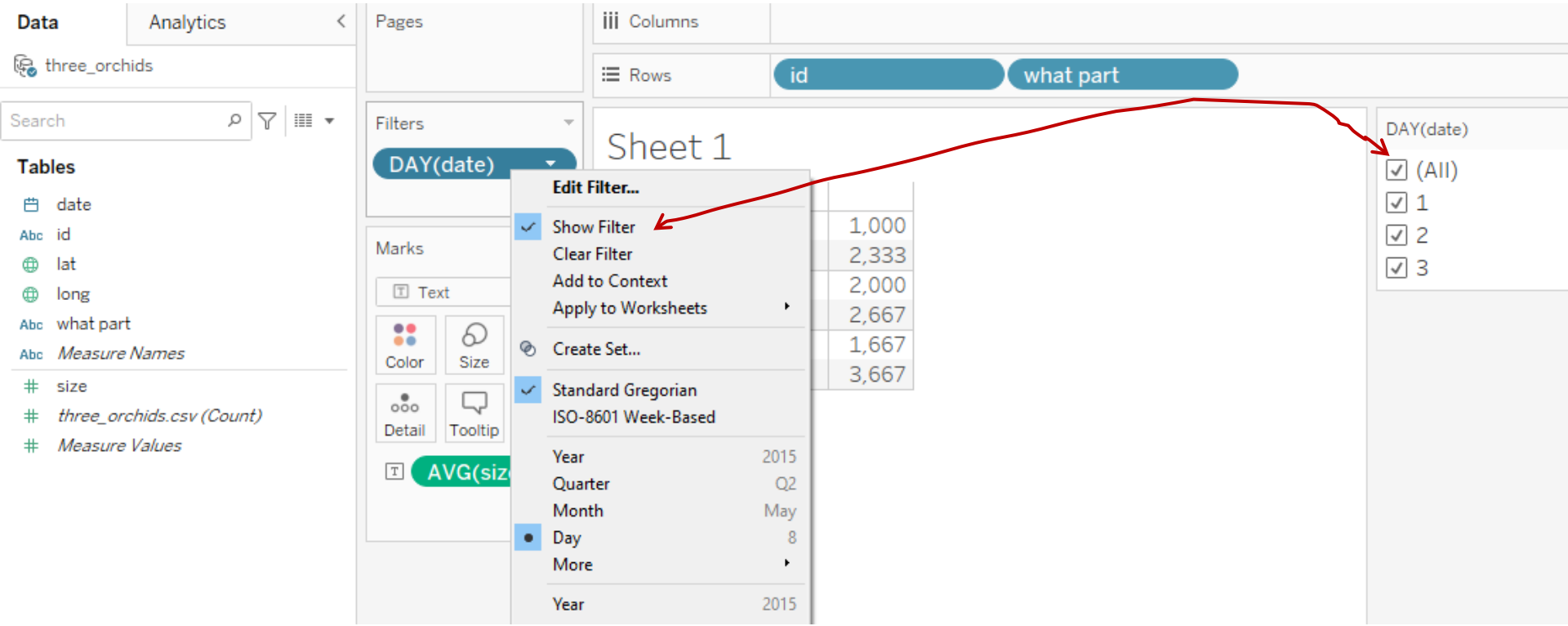


Sheet 1

id	what part	Day of date	
orch01	blossom	1	0,000
		2	1,000
		3	2,000
	plant	1	1,000
		2	2,000
		3	4,000
orch02	blossom	1	0,000
		2	2,000
		3	4,000
	plant	1	2,000
		2	3,000
		3	3,000
orch03	blossom	1	0,000
		2	2,000
		3	3,000
	plant	1	3,000
		2	4,000
		3	4,000

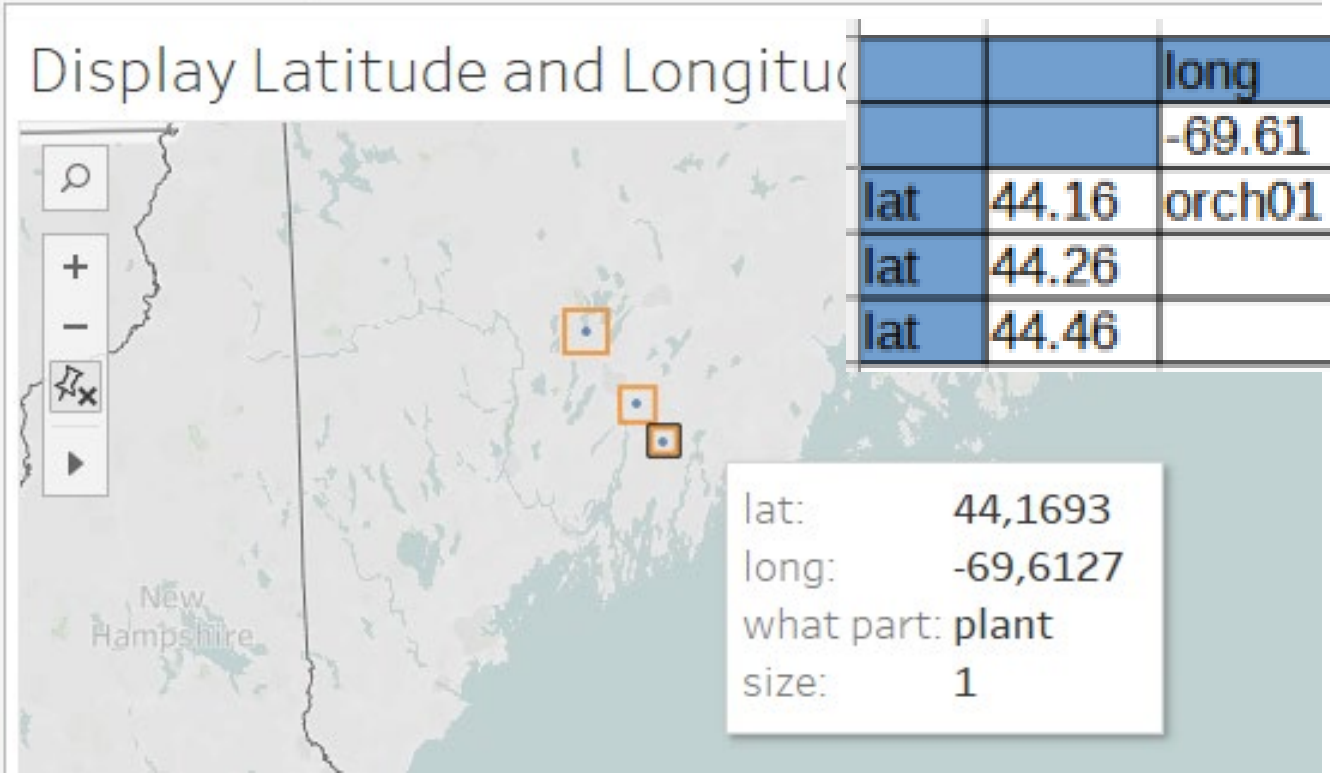

Data
Analytics
three_orchids
Search
Tables
date
id
lat
long
what part
Measure Names
size
three_orchids.csv (Count)
Measure Values
Pages
Filters
DAY(date)
Marks
Text
Color
Size
Text
Detail
Tooltip
AVG(size)
Columns
Rows
id
what part
DAY(date)
Sheet 1
id
what part
Day of date
orch01 blossom 1 0,000
2 1,000
3 2,000
plant 1 1,000
2 2,000
3 4,000
orch02 blossom 1 0,000
2 2,000
3 4,000
plant 1 2,000
2 3,000
3 3,000
orch03 blossom 1 0,000
2 2,000
3 3,000
plant 1 3,000
2 4,000
3 4,000


Data
Analytics
three_orchids
Search
Tables
date
id
lat
long
what part
Measure Names
size
three_orchids.csv (Count)
Measure Values
Pages
Filters
Marks
Text
Color
Size
Text
Detail
Tooltip
AVG(size)
Columns
Rows
id
what part
DAY(date)
Sheet 1
id
what pa
orch01
blosson
plant
orch02
blosson
plant
orch03
blosson
plant
Filter Field [date]
How do you want to filter on [date]?
Relative Date
Range of Dates
Years
Quarters
Months
Days
Week numbers
Weekdays
Month / Year
Month / Day / Year
Individual Dates
Count
Count (Distinct)
Minimum
Maximum
Attribute
Next >
Cancel

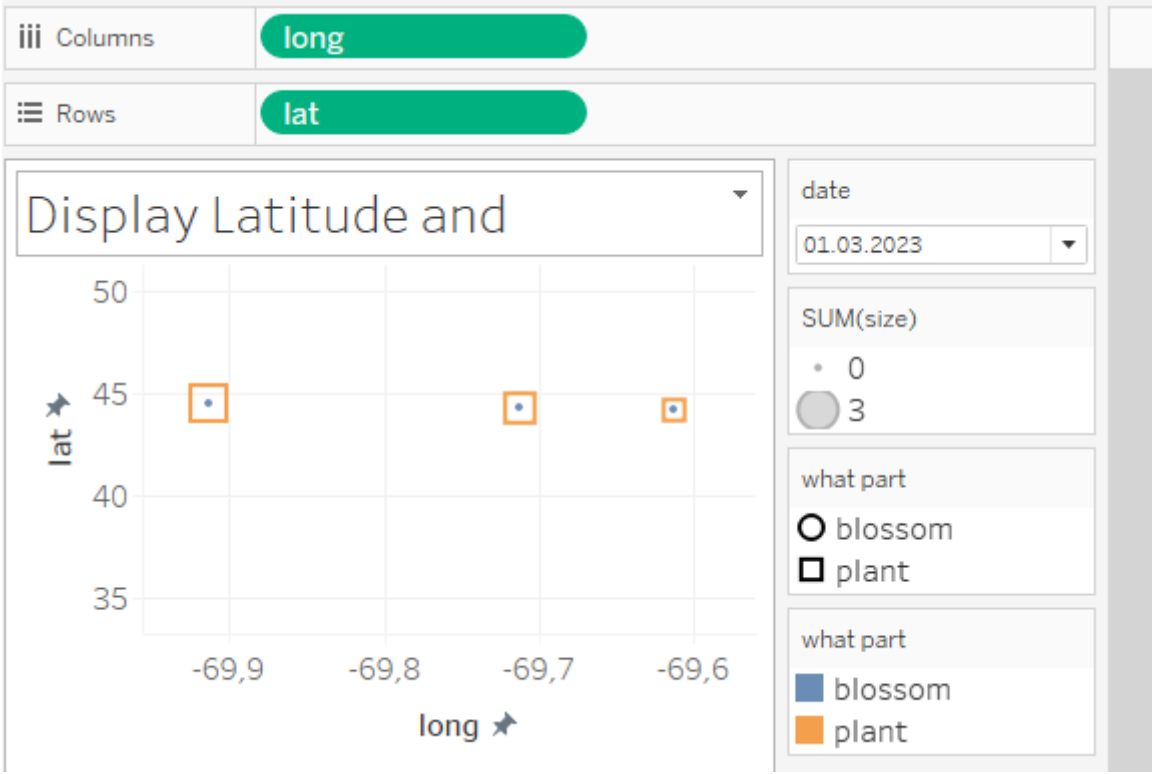

Data
Analytics
three_orchids
Search
Tables
date
id
lat
long
what part
Measure Names
size
three_orchids.csv (Count)
Measure Values
Pages
Columns
Rows
id
what part
Filters
DAY(date)
Sheet 1
Marks
Text
Color
Size
Detail
Tooltip
AVG(siz
Edit Filter...
Show Filter
Clear Filter
Add to Context
Apply to Worksheets
Create Set...
Standard Gregorian
ISO-8601 Week-Based
Year 2015
Quarter Q2
Month May
Day 8
More
Year 2015
1,000
2,333
2,000
2,667
1,667
3,667
DAY(date)
(All)
1
2
3

Columns: long

Rows: lat



		long	long	long
		-69.61	-69.71	-69.91
lat	44.16	orch01		
lat	44.26		orch02	
lat	44.46			orch03


Columns
long
Rows
lat
Display Latitude and
50
45
40
35
lat
-69,9
-69,8
-69,7
-69,6
long
date
01.03.2023
SUM(size)
0
3
what part
blossom
plant
what part
blossom
plant

Pages

Columns: long

Rows: lat

Filters

DAY(date): 1

Marks

Automatic

Color | Size | Label | Detail | Tooltip

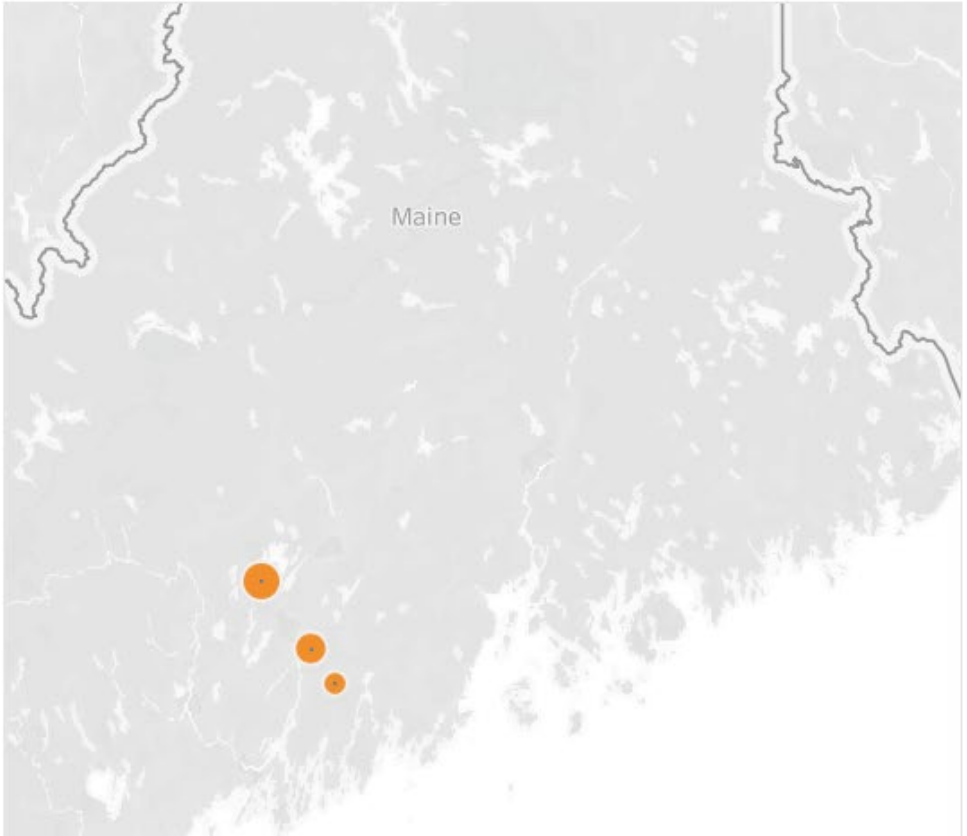
what part

SUM(size)

id

id

Sheet 1



DAY(date)

- [ ] (All)
- [x] 1
- [ ] 2
- [ ] 3

SUM(size)

0

3

what part

blossom

plant

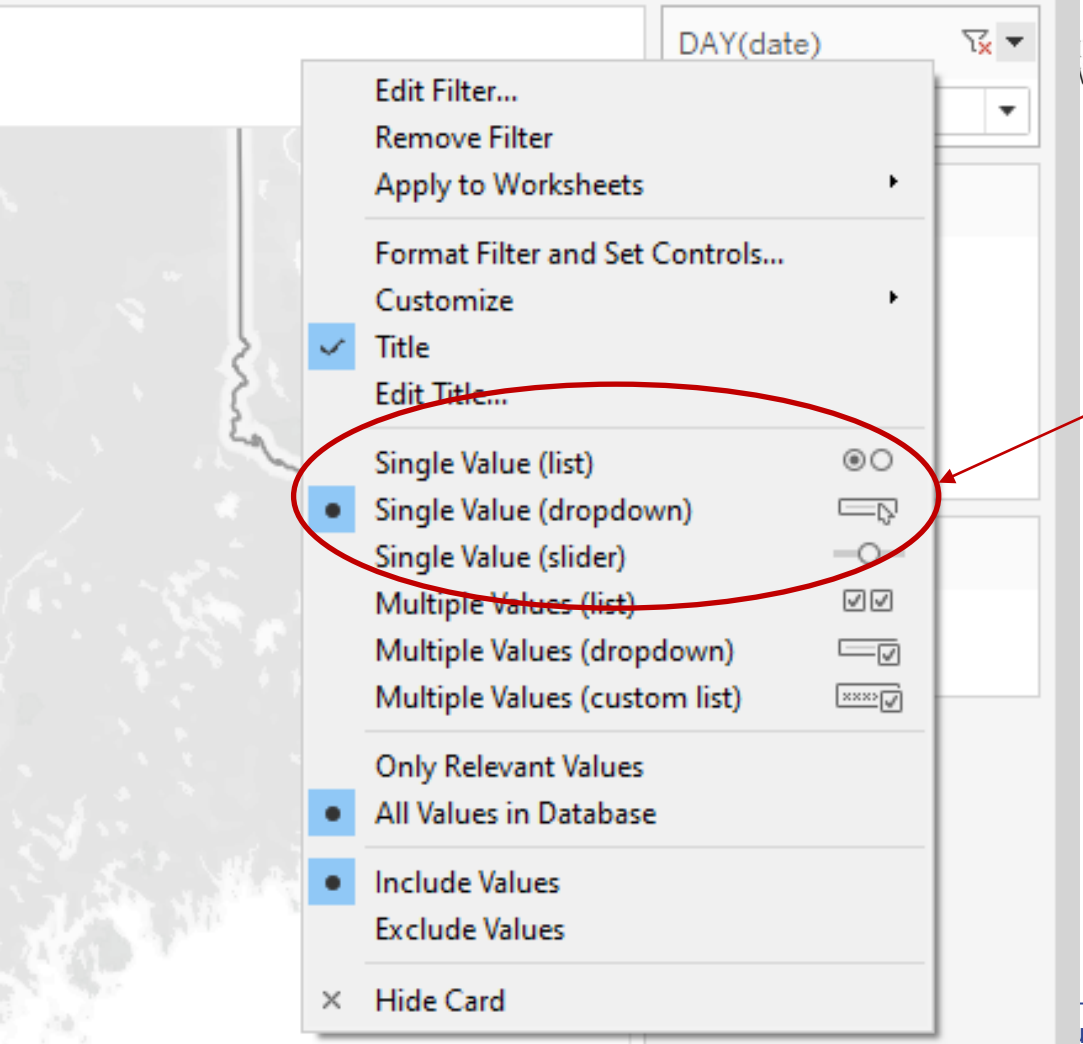
For symbo

1 geo

0 or more

0 to 2 M

May use sp
in place of



We want just one day in a view, otherwise we will get non-sensical sums or averages across several days!

Pages

Columns: long

Rows: lat

Filters

DAY(date): 2

Marks

Automatic

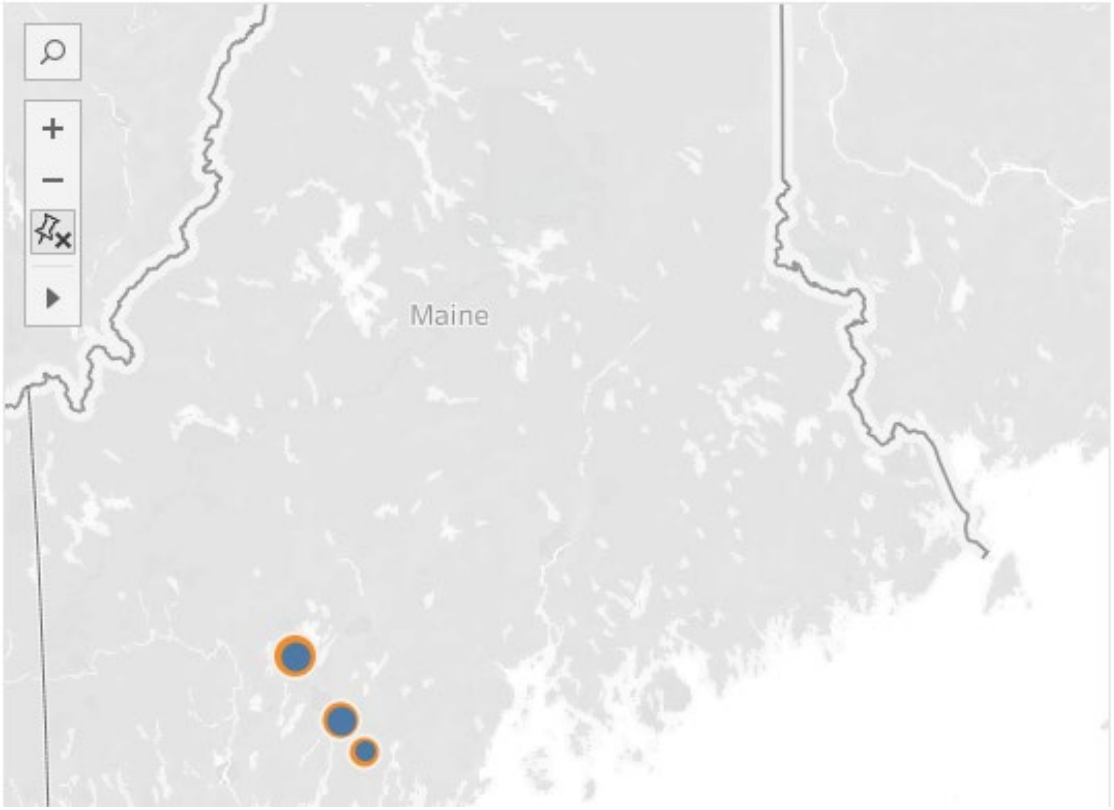
Color | Size | Label | Detail | Tooltip

what part

AVG(size)

id

Sheet 1



DAY(date)

2

AVG(size)

1,000
2,000
3,000
4,000

what part

blossom
plant

Pages

Columns: long

Rows: lat

Filters

DAY(date): 2

Marks

Pie

Color | Size | Label

Detail | Tooltip | Angle

what part

AVG(size)

id

Sheet 1

DAY(date)

2

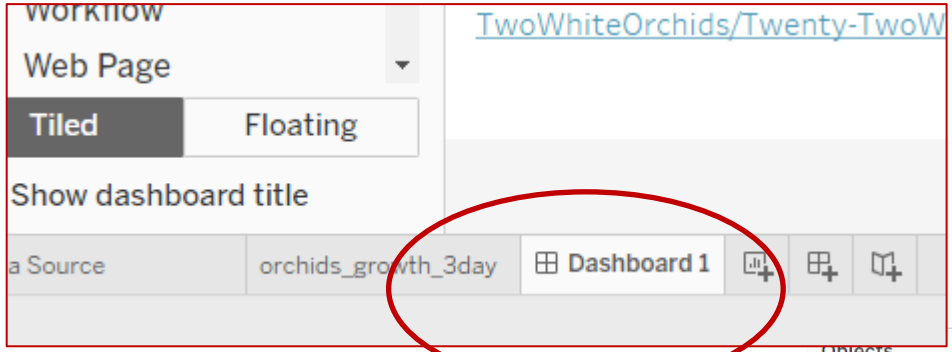
AVG(size)

3,000
4,000
5,000
6,000

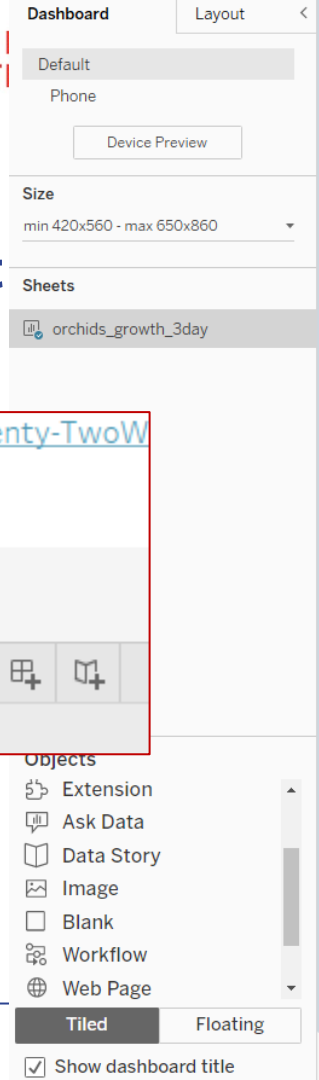
what part

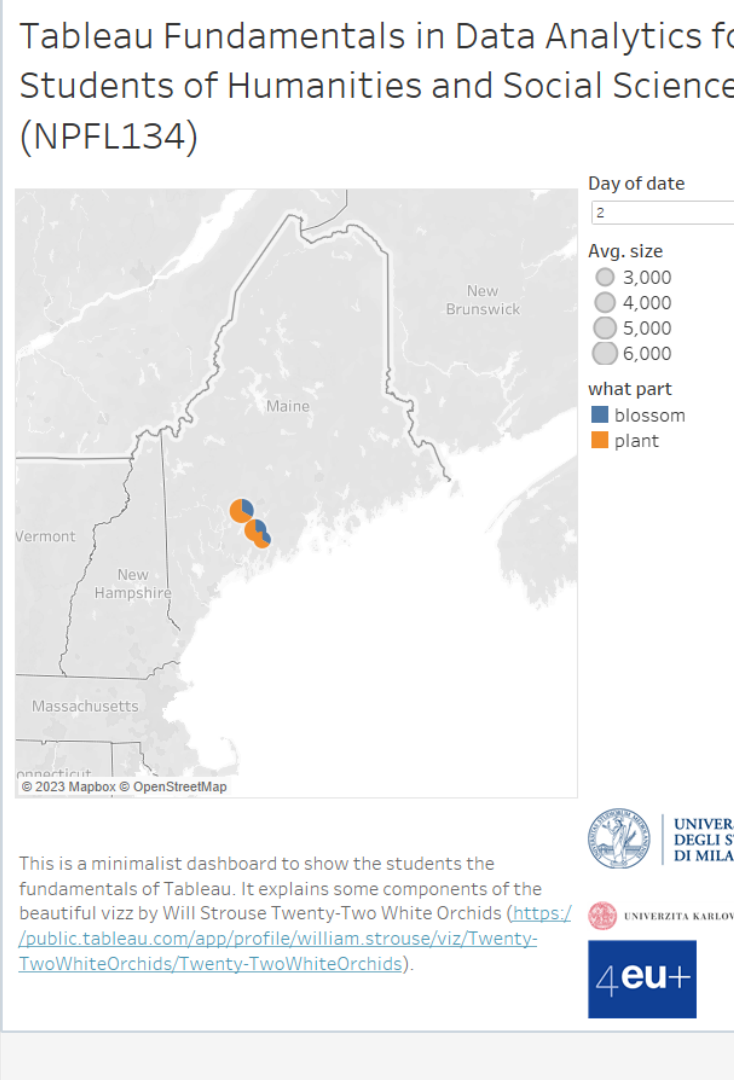
blossom
plant

Create a dashboard with a text column



https://public.tableau.com/app/profile/silvie.cinkova/viz/Three_orchids/Dashboard1?publish=yes



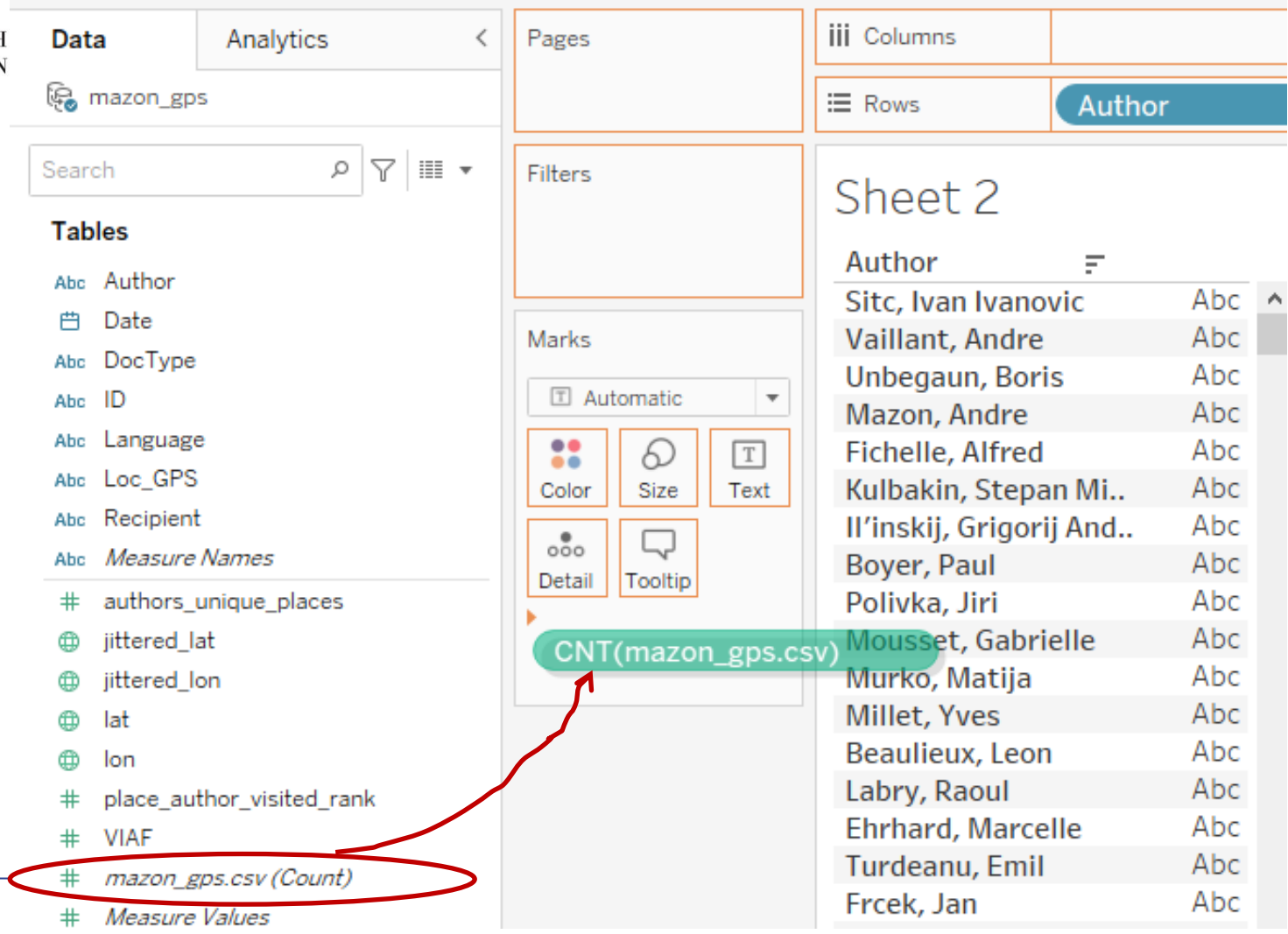


André Mazon correspondence collection metadata

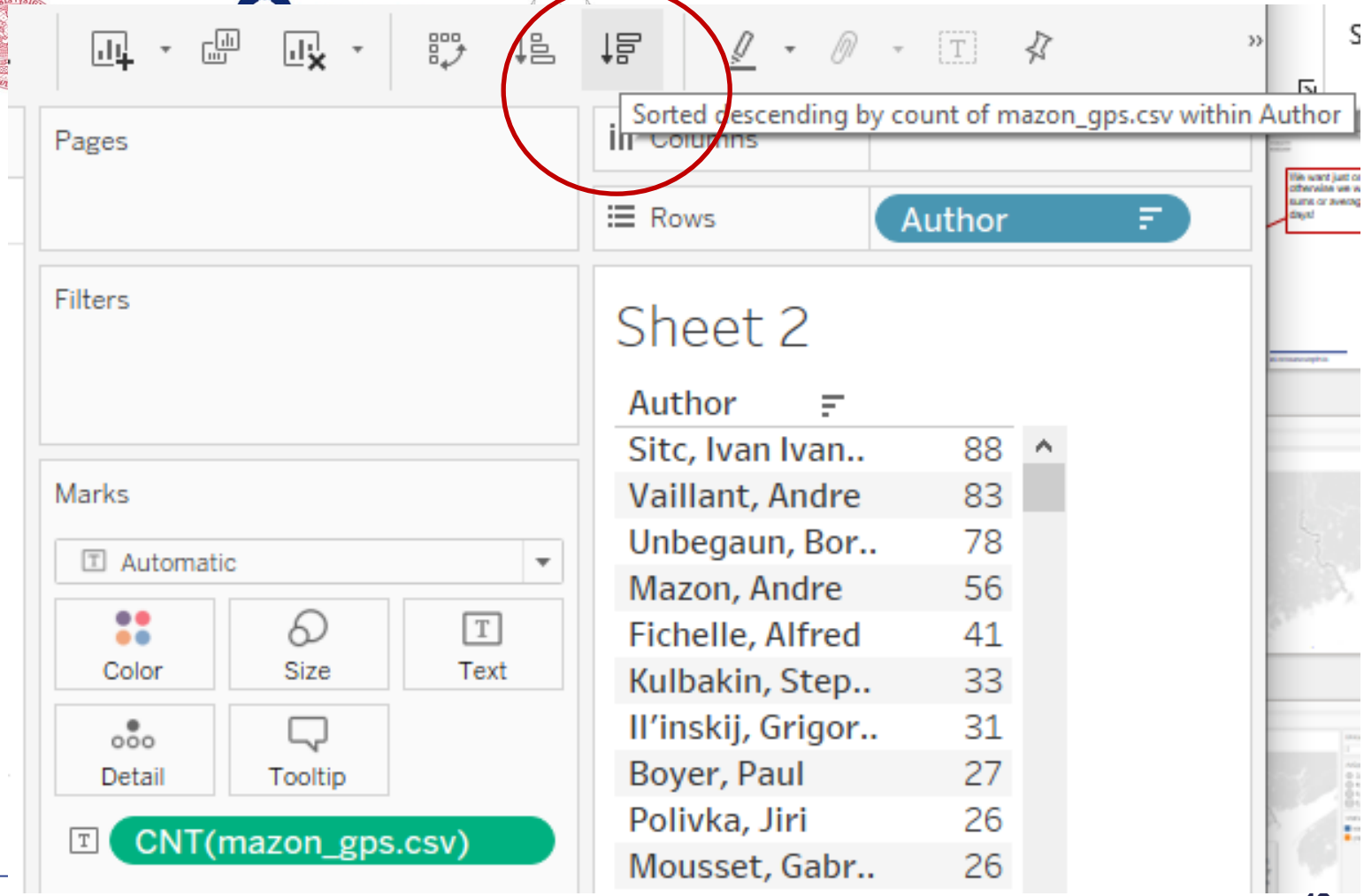
mazon_gps.csv

ID	facsimile file name
Date	when written
DocType	document type
Language	(mostly) written in language
Author	letter author
VIAF	author's ID in VIAF
Recipient	letter recipient
Loc_GPS	where written
lon , lat	place's exact longitude and latitude
place_author_visited_rank	temporary rank in places from where the author wrote
authors_unique_places	how many places the author wrote from
jittered lon, lat	place's longitude and latitude with added random noise to prevent overplotting

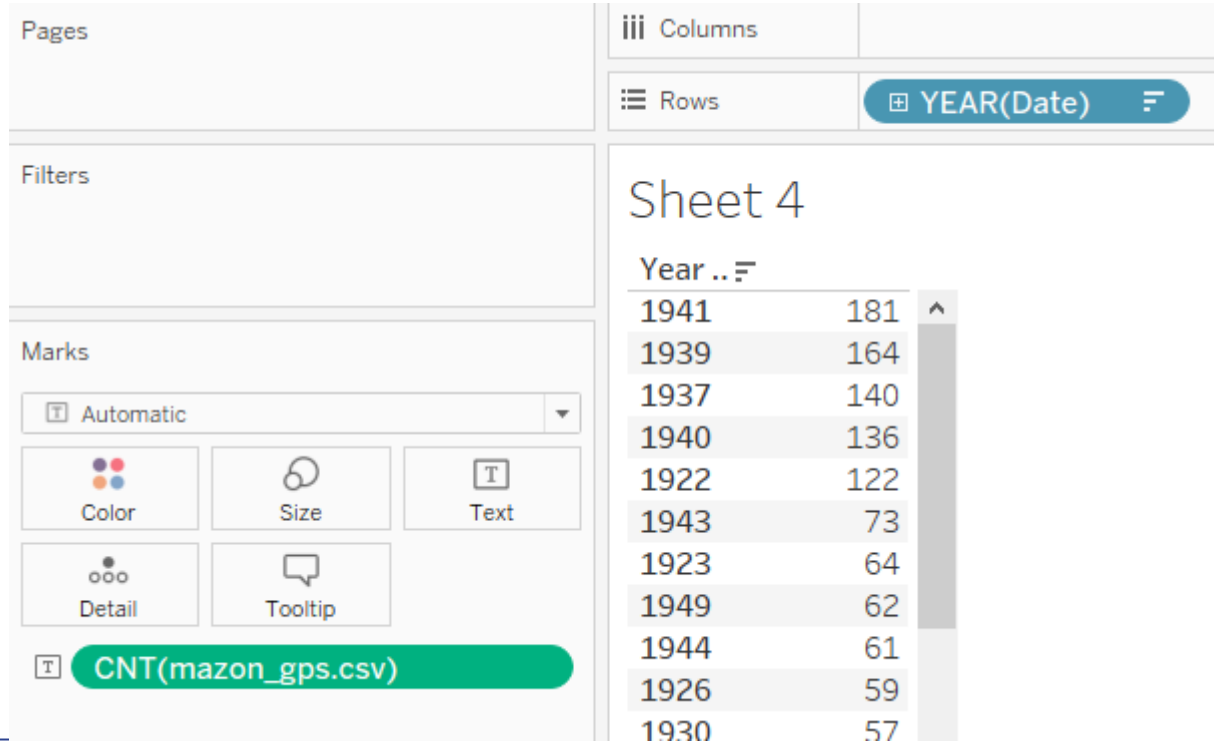
First glance: How many authors, how many letters?



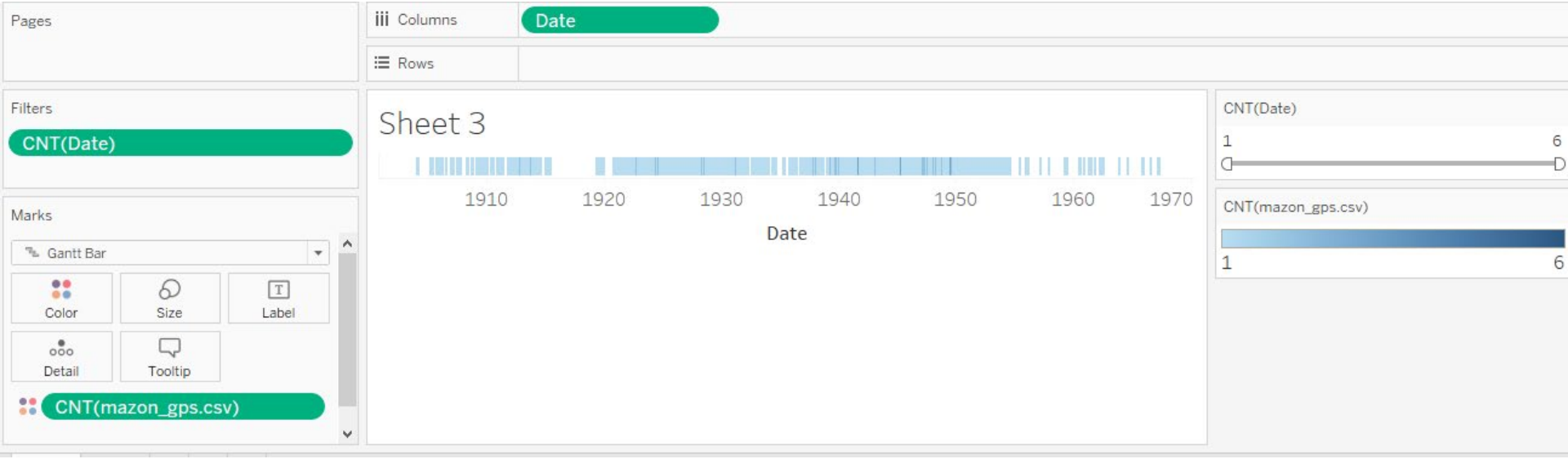
Sort authors by the amount of their letters



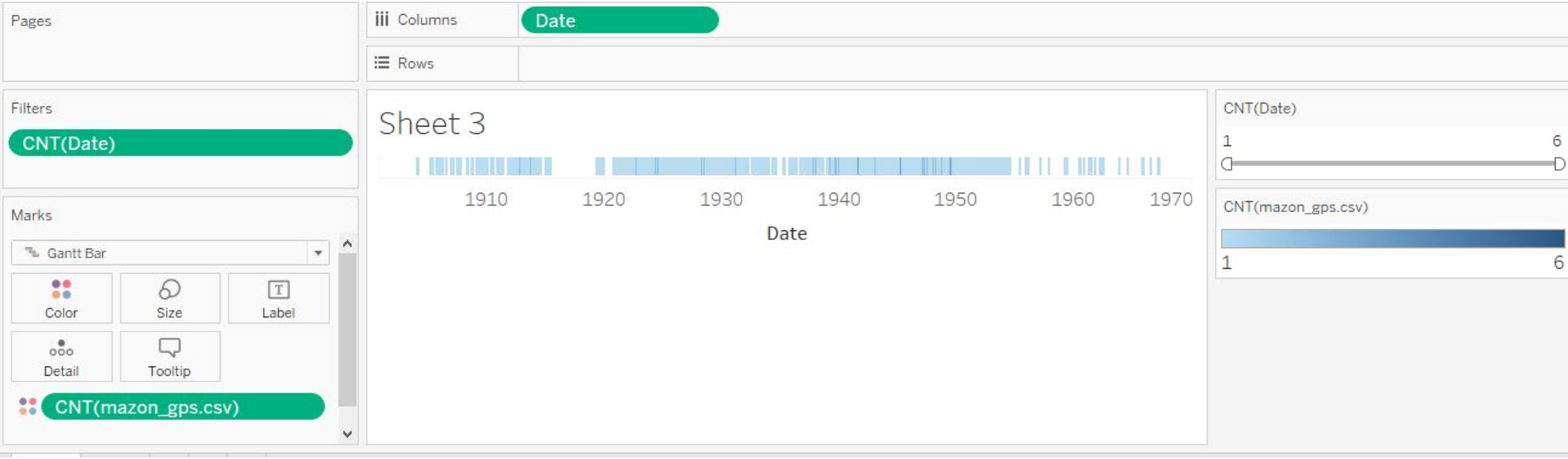
How was the correspondence distributed in time?



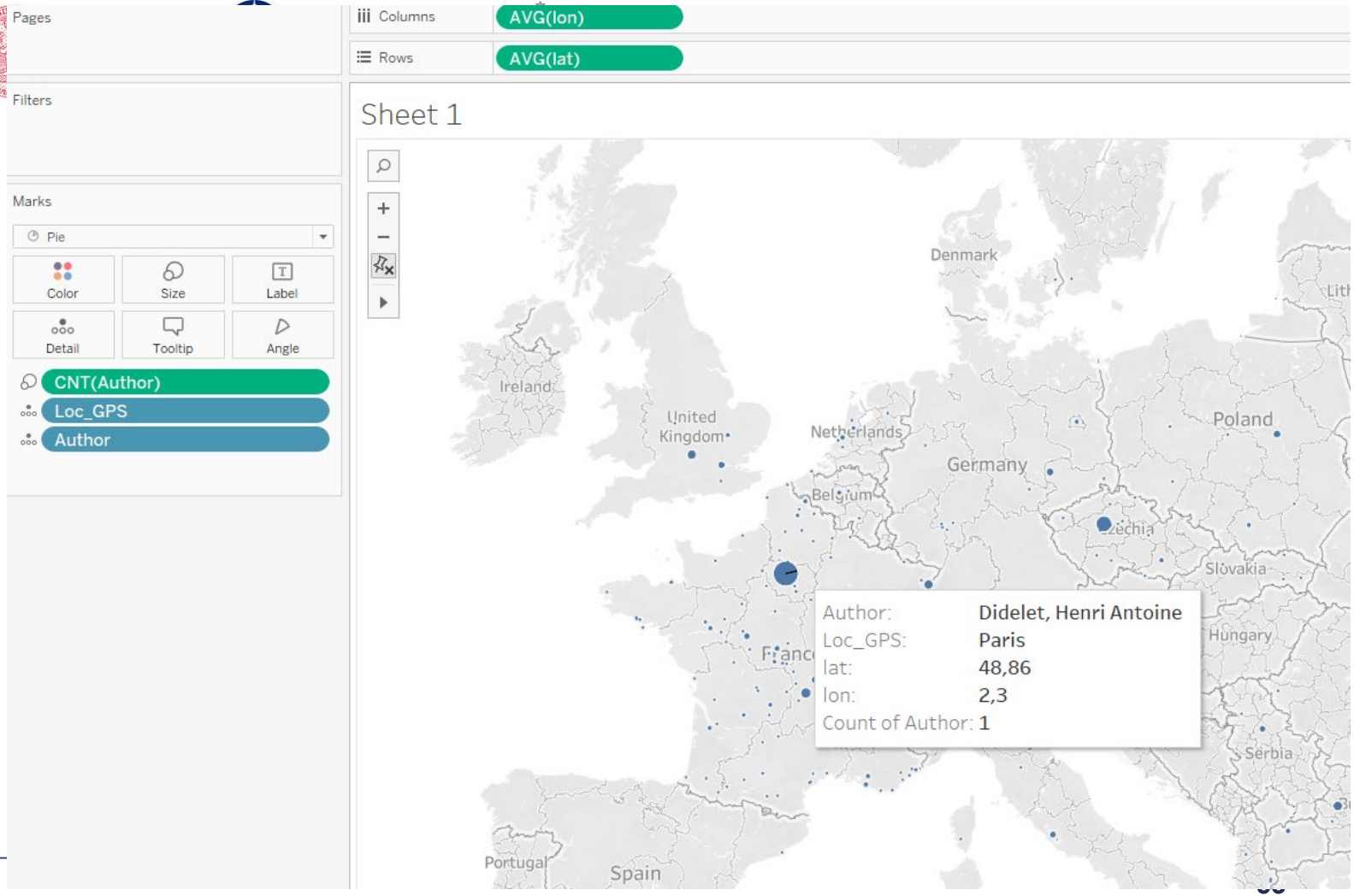
How was the correspondence distributed in time? Time as a continuous variable



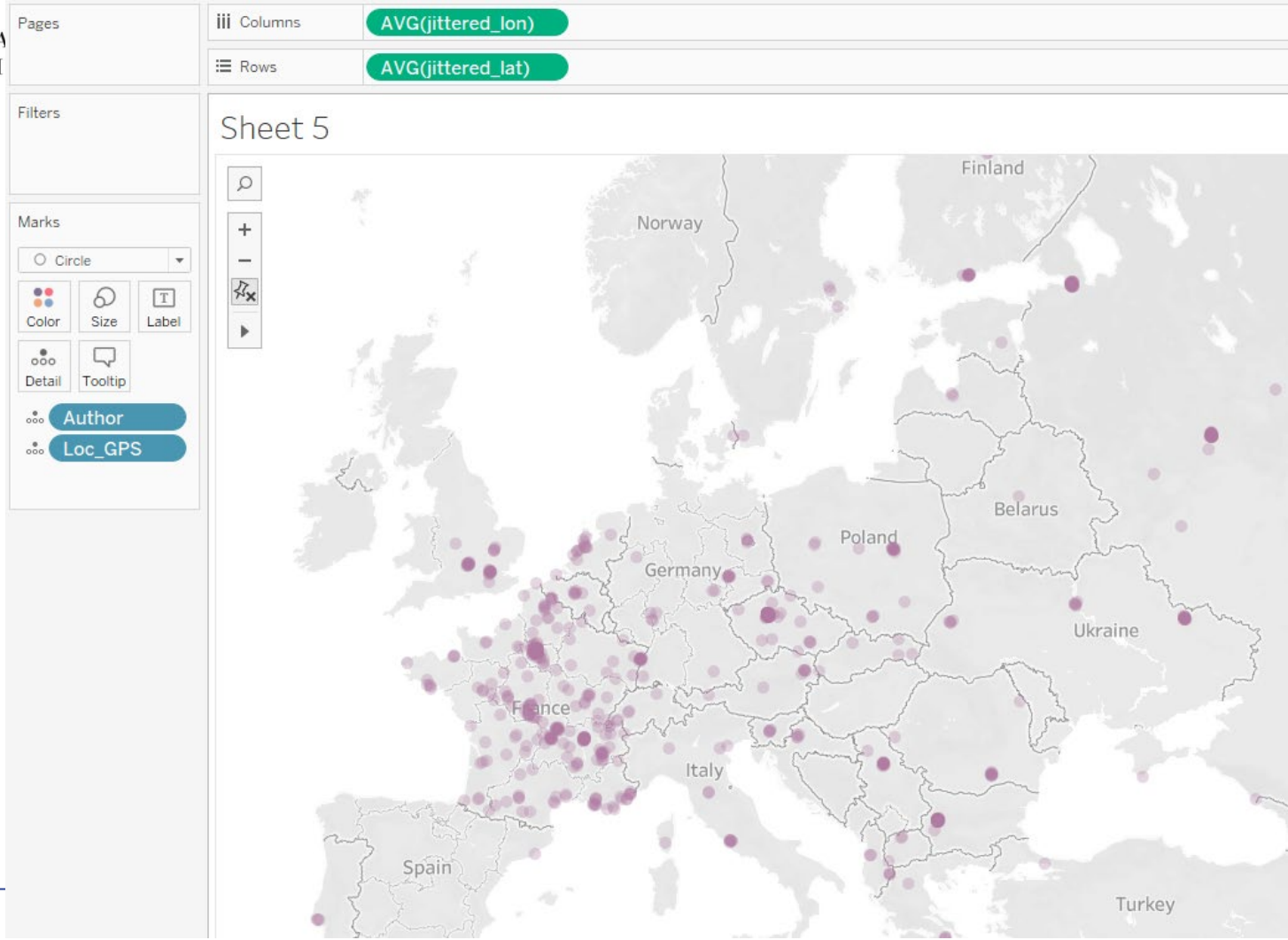
How was the correspondence distributed in time? Time as a continuous variable



From where were the letters coming?

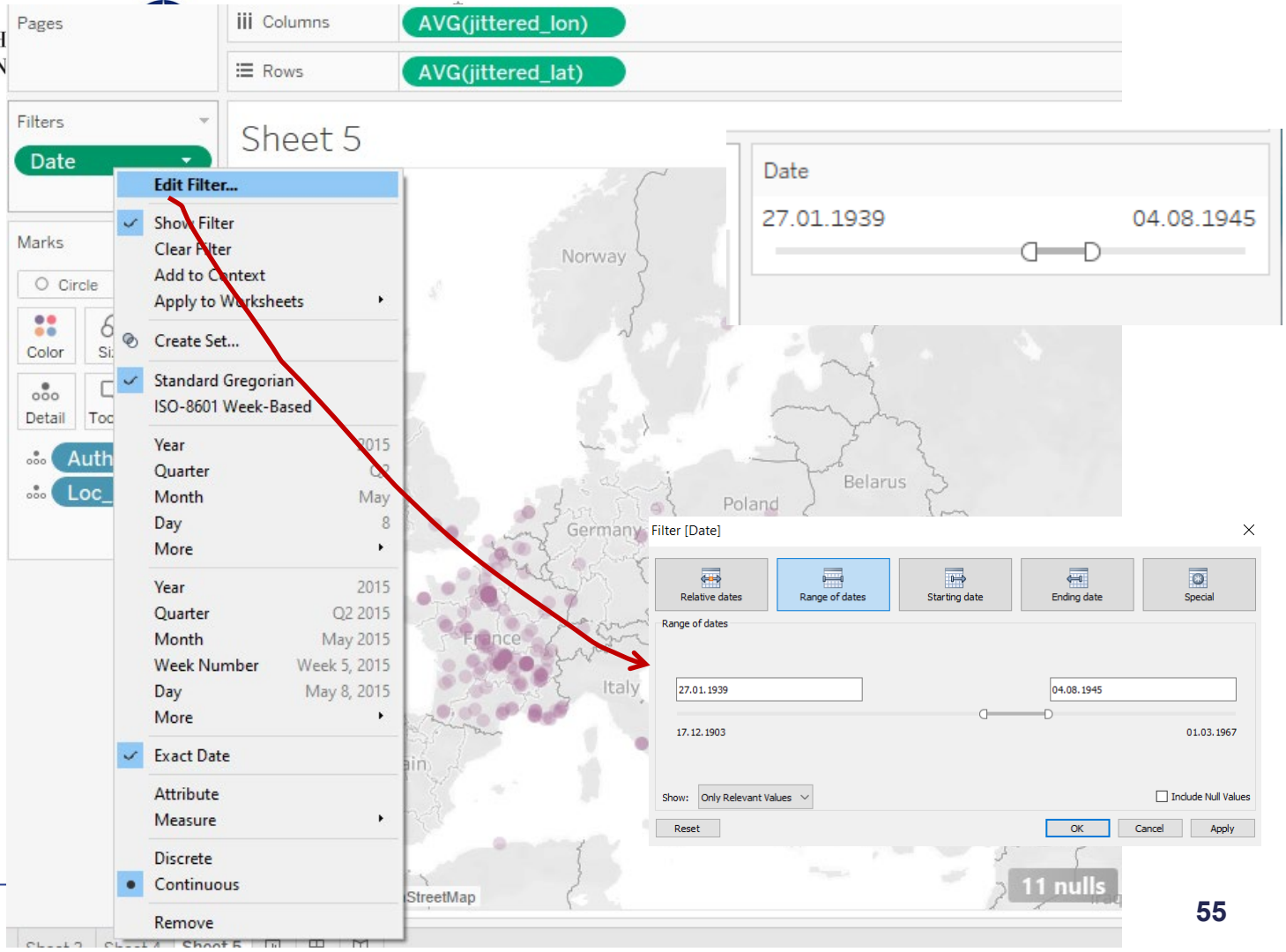


From where were the letters coming?



From where were the letters coming?

Continuous time filter



https://public.tableau.com/app/profile/silvie.cinkova/viz/2023-03-07Mazon/Sheet5?publish=yes