Triangle Plots for 62 Missouri Limestone Units

Missouri Department of Natural Resources

Calcite
versus
Dolomite
versus
Other Rock Materials

Division of Geology and Land Survey

Total Samples = 2446

Individual Samples are Classified as Calcite Limestone, High-Calcium Limestone, Magnesian Limestone, Dolomitic Limestone, Calcitic Dolomite, Dolomite, Magnesian Dolomite, Dolomitic Rock and Calcareous Rock based on Percentages of Calcite and Dolomite Minerals and Other Rock Materials as Calculated from Chemical Analyses of the Samples

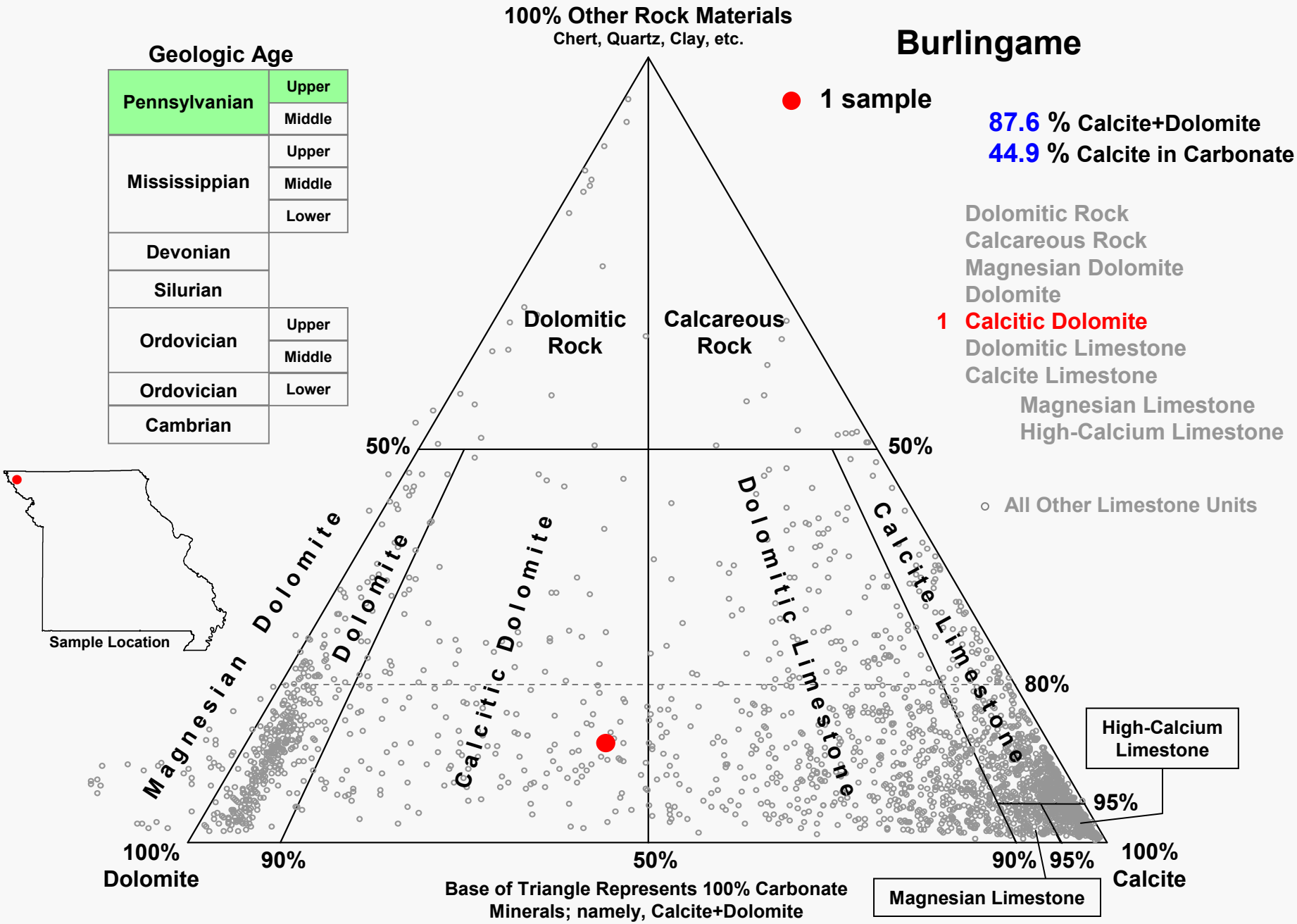
Plots are arranged from
Youngest to Oldest Limestone Unit

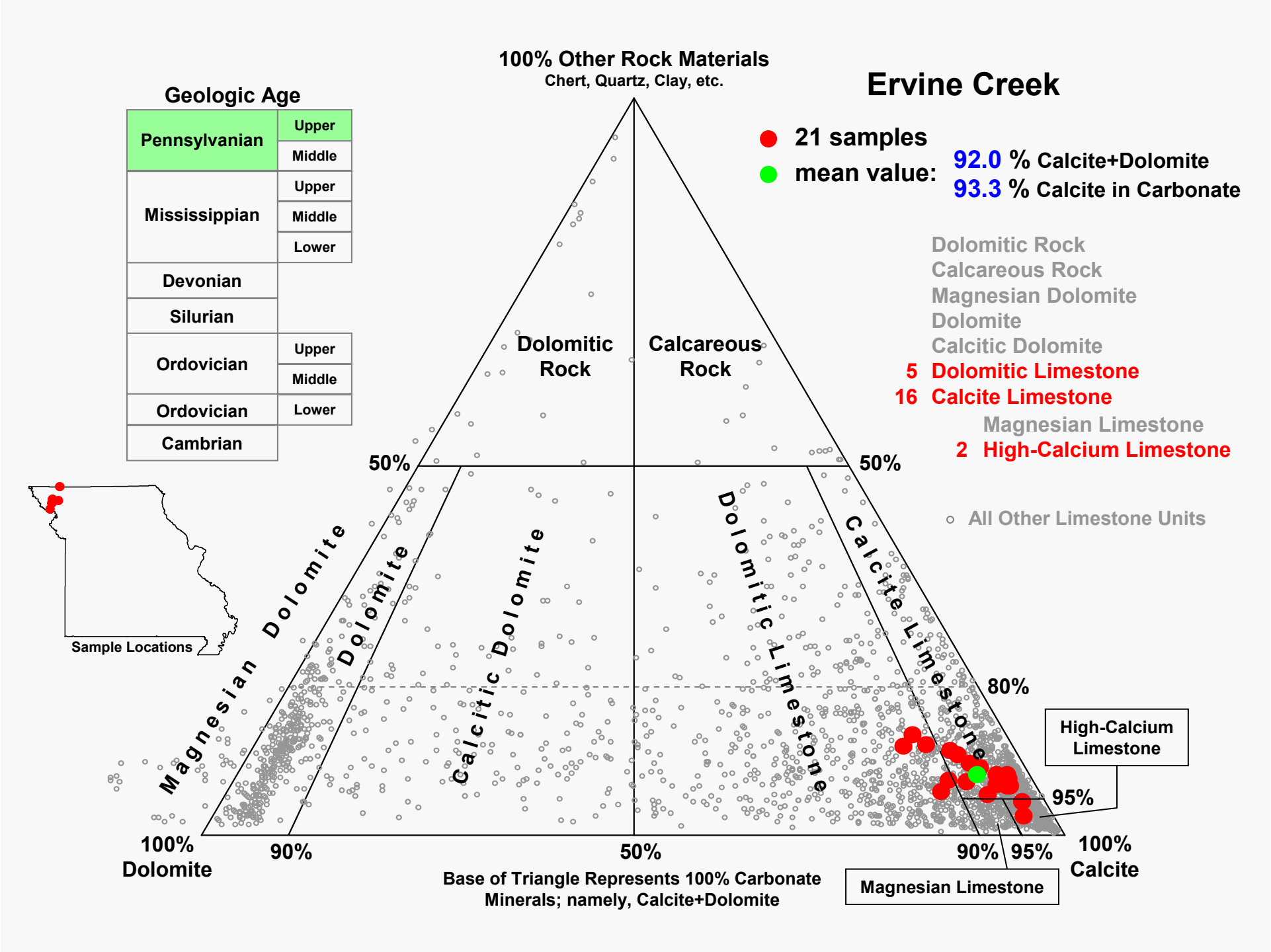
Stratigraphic and Geographic Summaries are Included

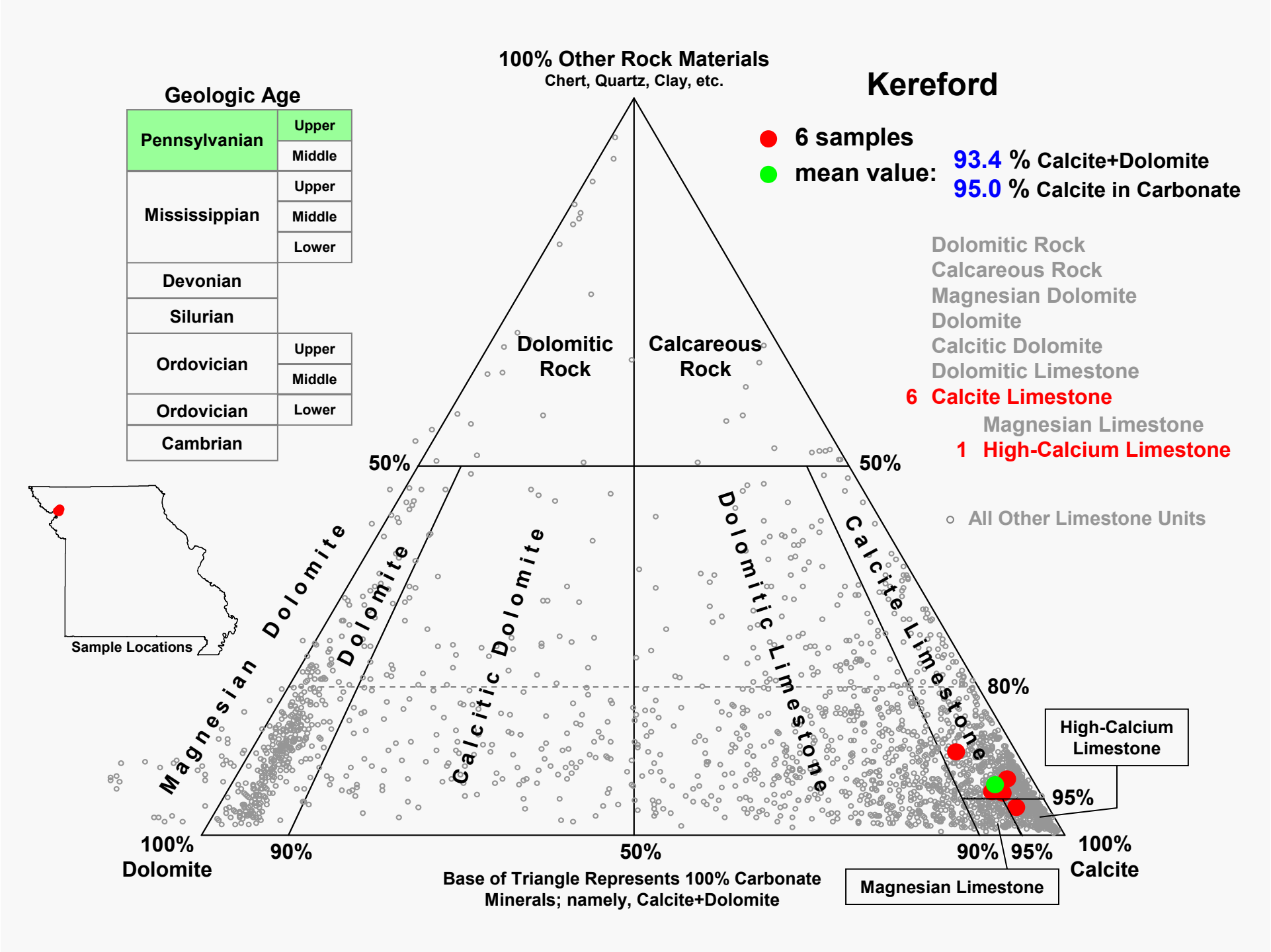
Based on Chemical Data from DGLS OFRs 82 thru 87

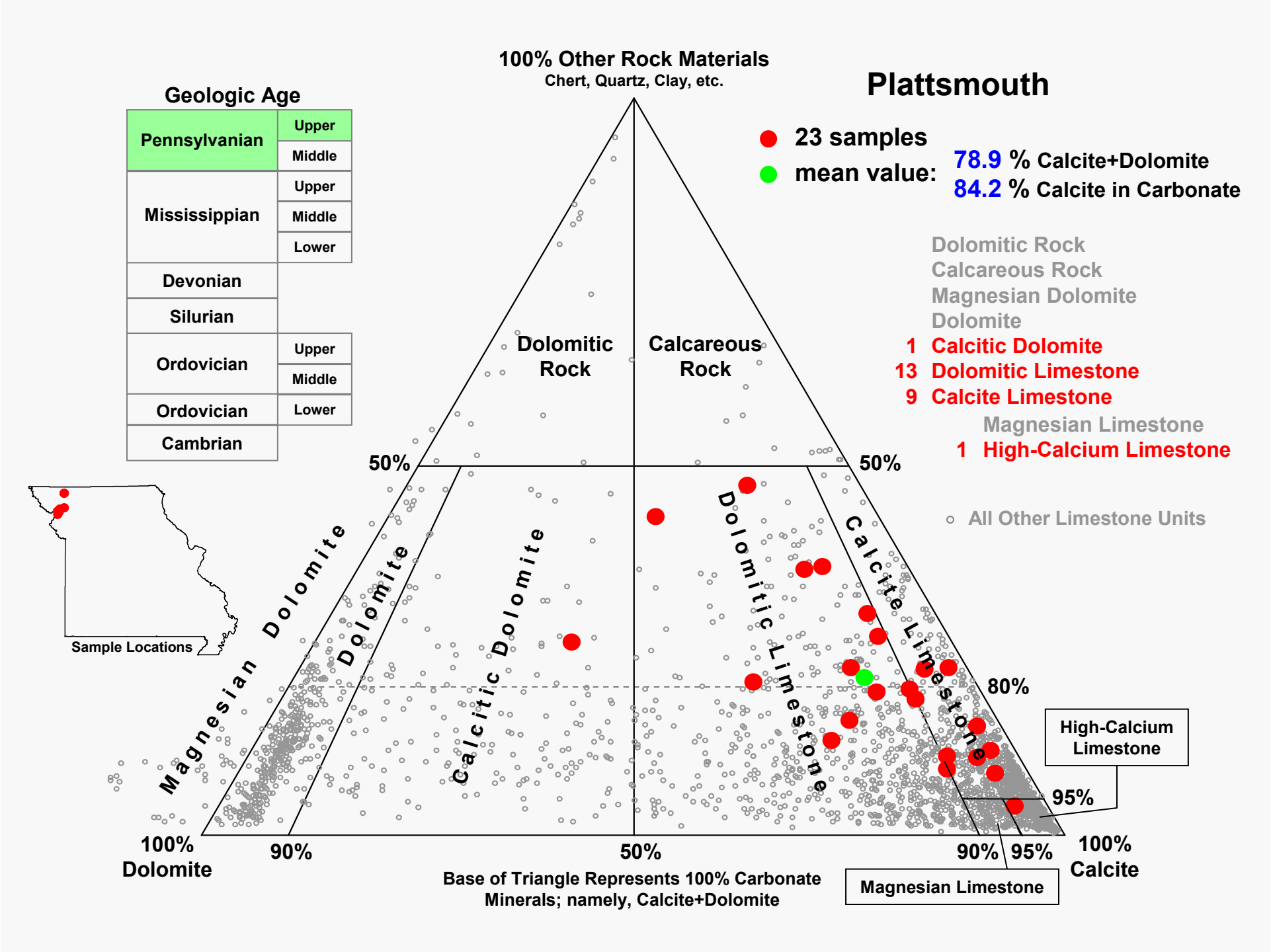
September 2011

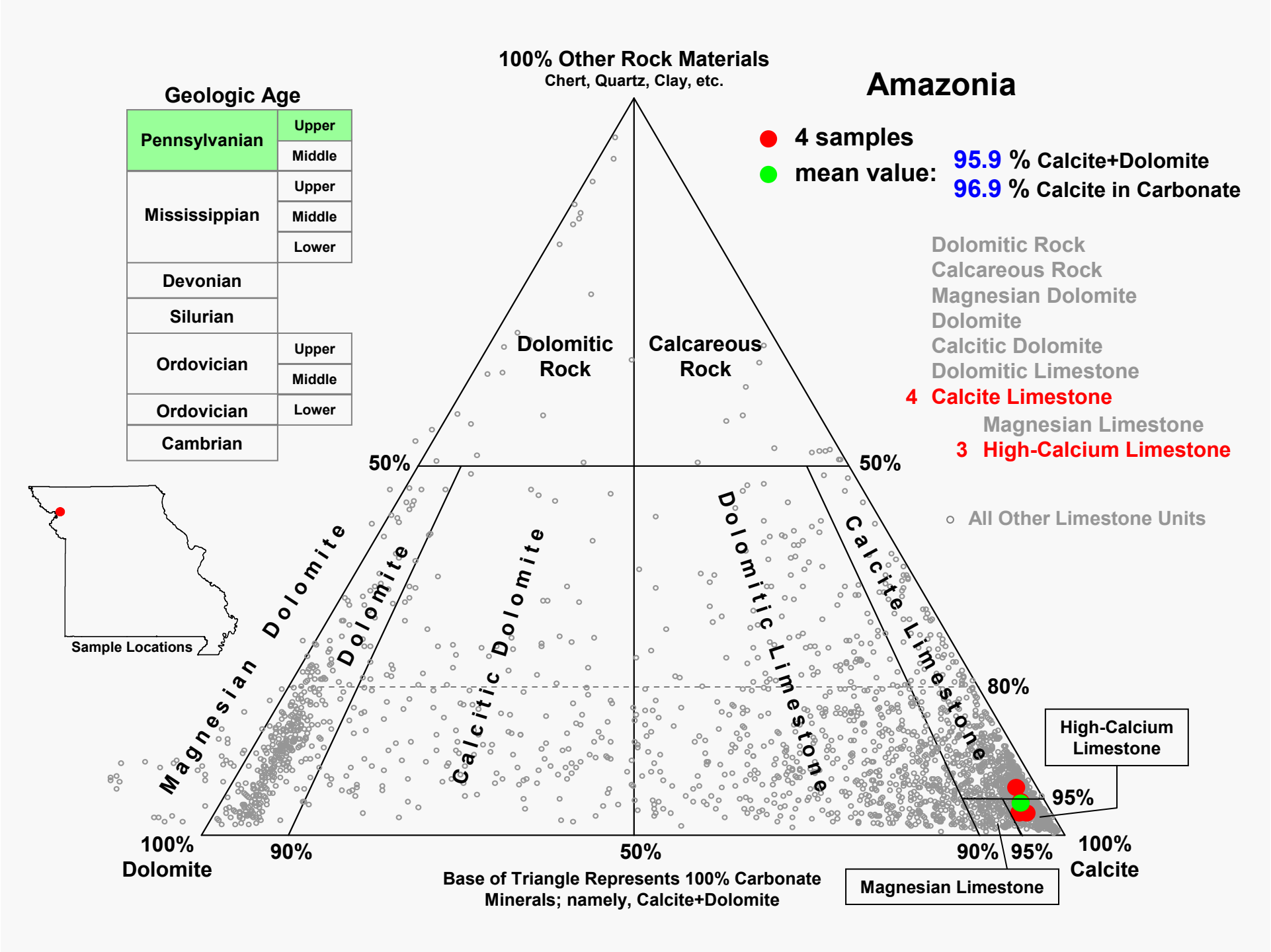
Burlingame

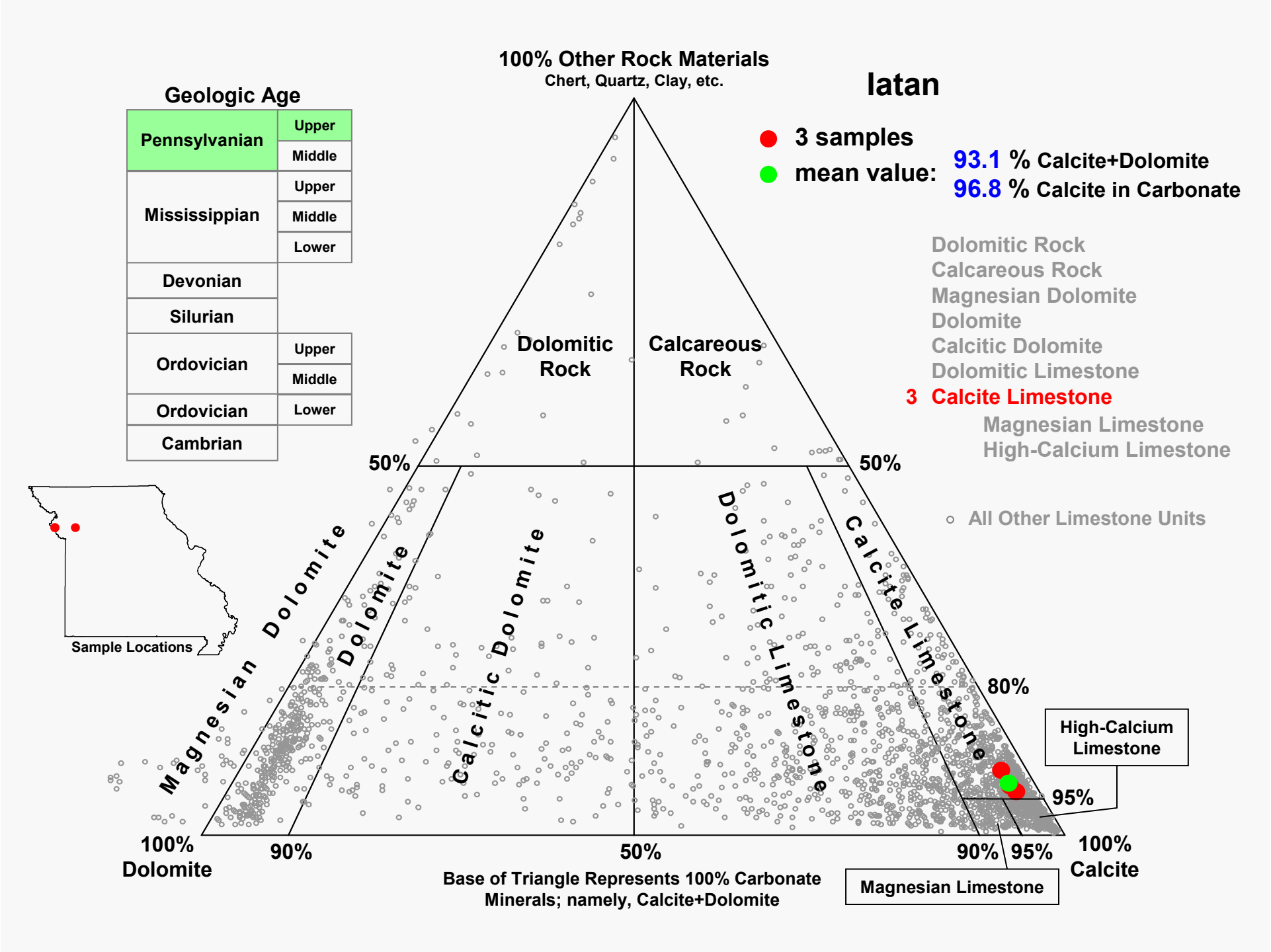

100% Other Rock Materials
Chert, Quartz, Clay, etc.
Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian
1 sample
87.6 % Calcite+Dolomite
44.9 % Calcite in Carbonate
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
1 Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
Magnesian Limestone
High-Calcium Limestone
All Other Limestone Units
Dolomitic Rock
Calcareous Rock
50%
50%
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
80%
95%
High-Calcium Limestone
Magnesian Limestone
Sample Location
100% Dolomite
90%
50%
90%
95%
100% Calcite
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite

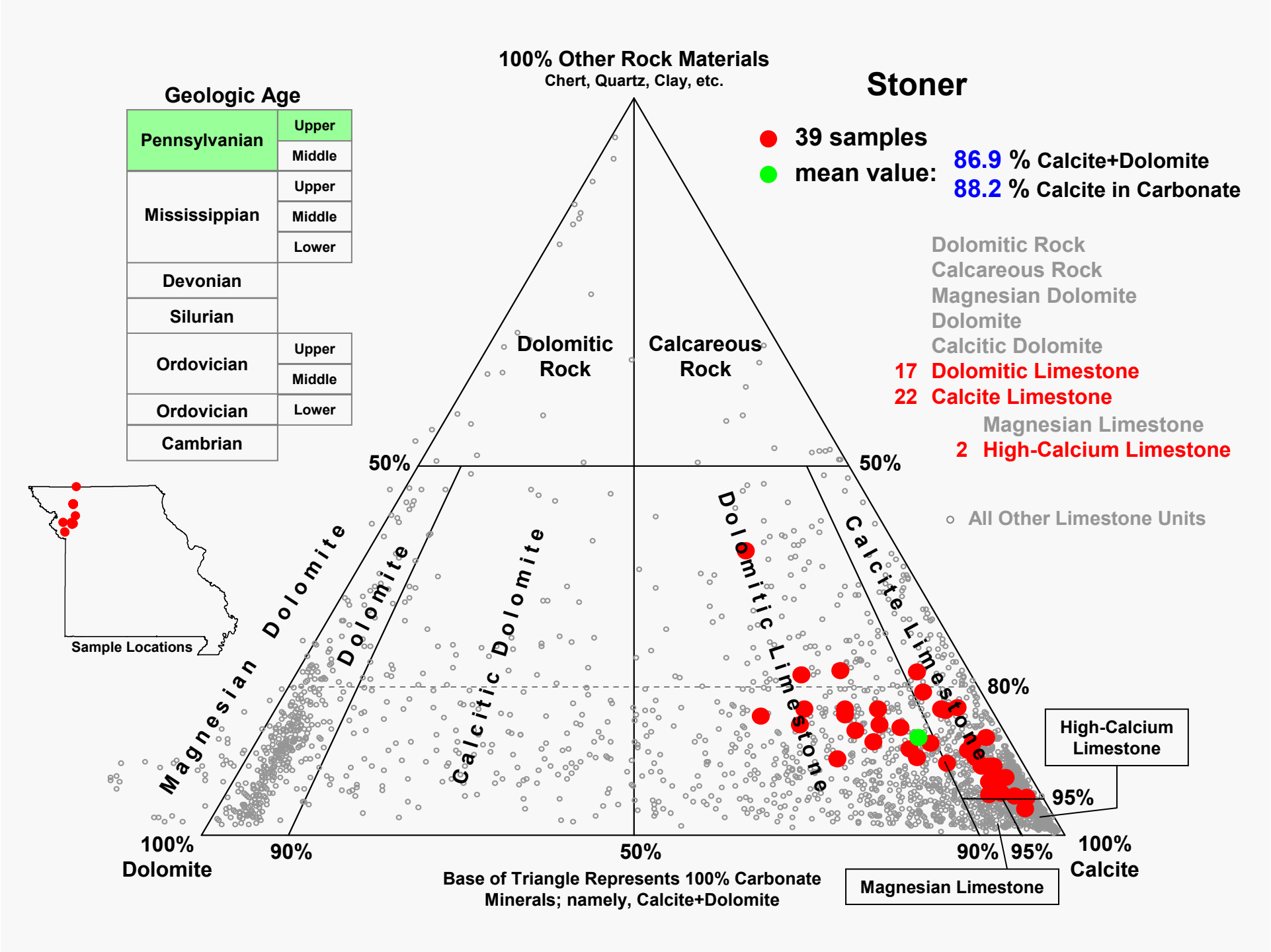

Ervine Creek
21 samples
mean value:
92.0 % Calcite+Dolomite
93.3 % Calcite in Carbonate
Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian
100% Other Rock Materials
Chert, Quartz, Clay, etc.
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
50%
50%
80%
95%
100% Dolomite
90%
50%
90%
95%
100% Calcite
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
5 Dolomitic Limestone
16 Calcite Limestone
Magnesian Limestone
2 High-Calcium Limestone
All Other Limestone Units
High-Calcium Limestone
Magnesian Limestone
Sample Locations

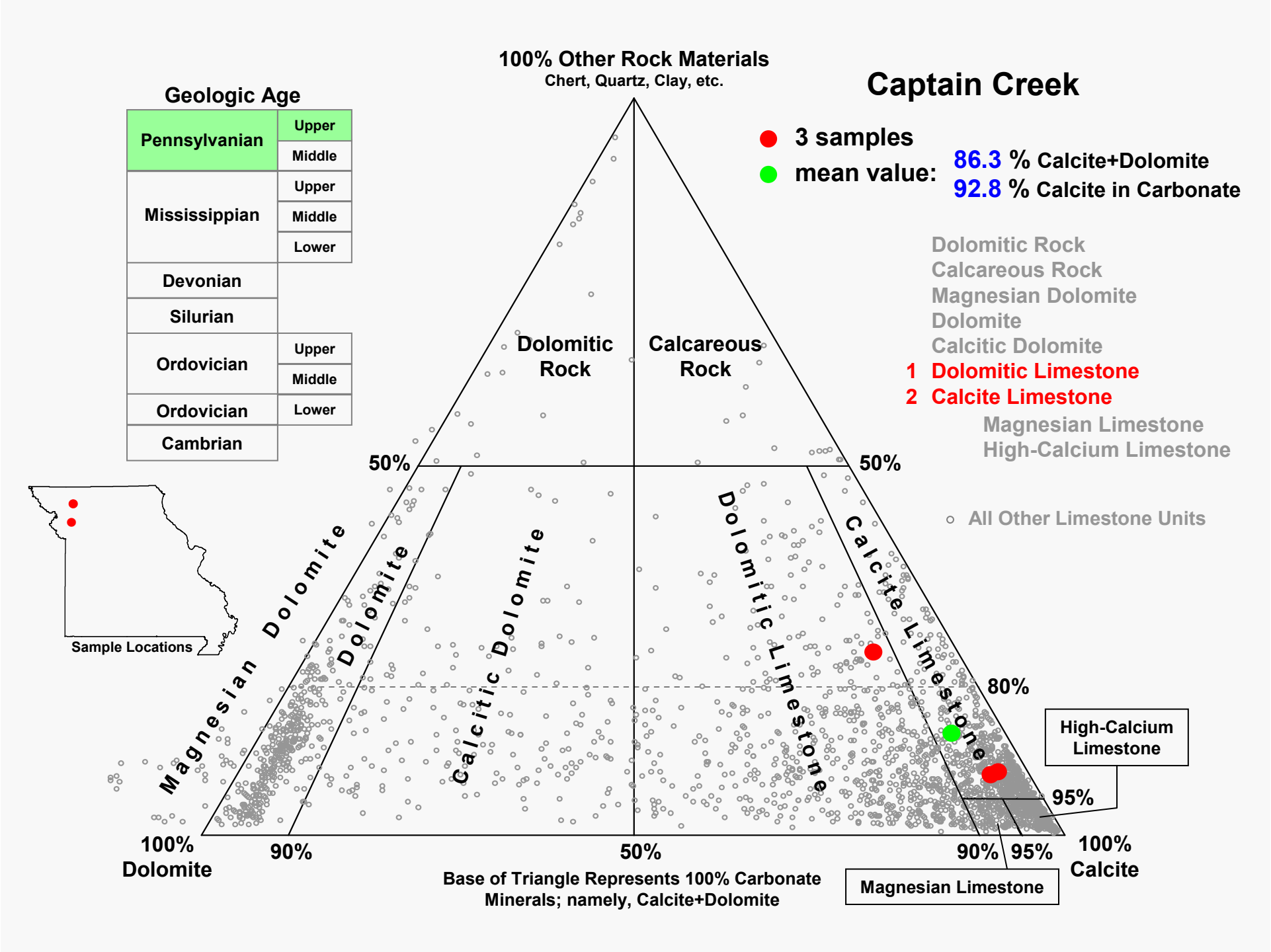

Kereford
6 samples
mean value:
93.4 % Calcite+Dolomite
95.0 % Calcite in Carbonate
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
6 Calcite Limestone
Magnesian Limestone
1 High-Calcium Limestone
All Other Limestone Units
100% Other Rock Materials
Chert, Quartz, Clay, etc.
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
50%
50%
80%
95%
100% Dolomite
90%
50%
90%
95%
100% Calcite
High-Calcium Limestone
Magnesian Limestone
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite
Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian
Sample Locations

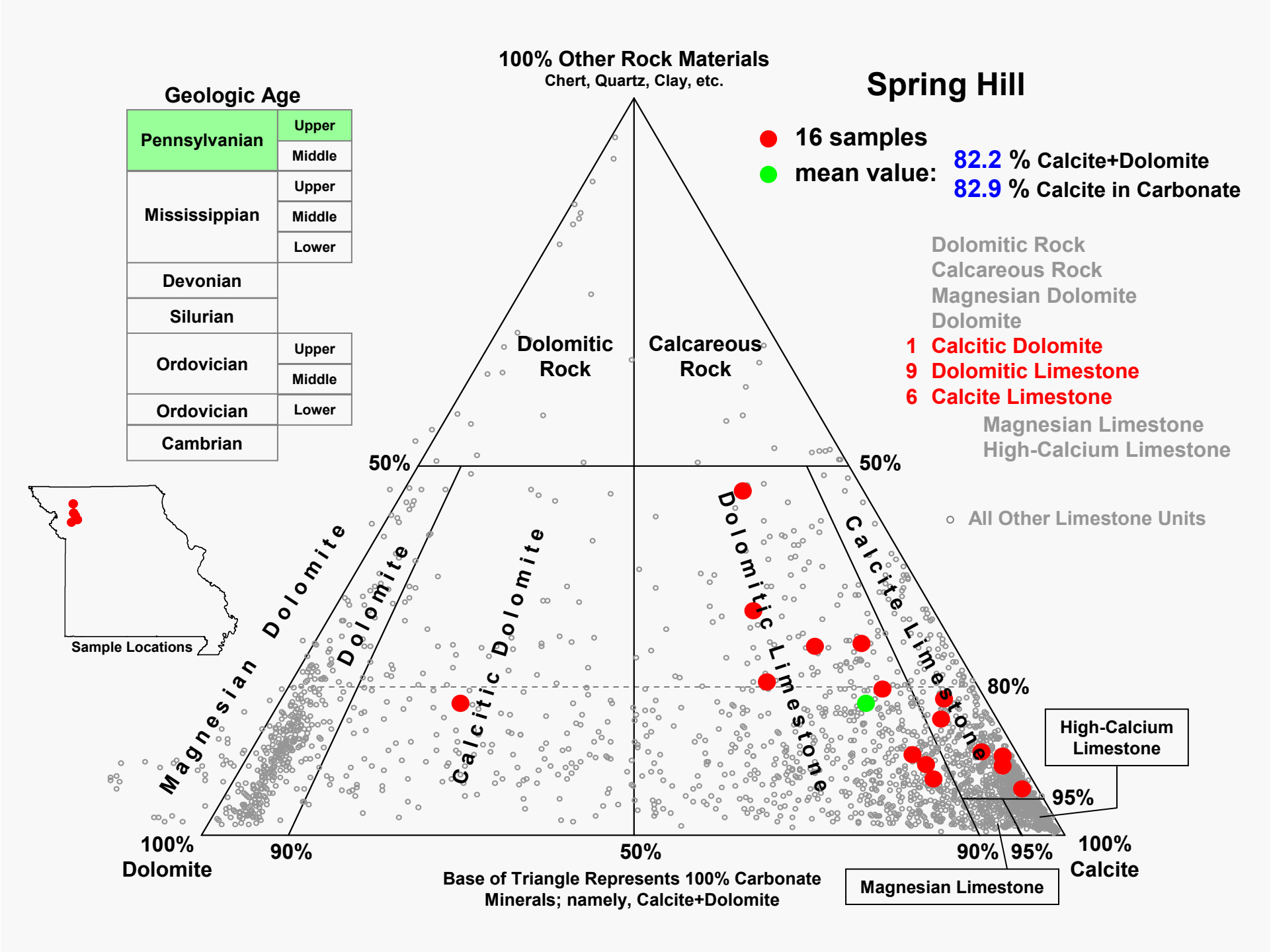

Plattsmouth
23 samples
mean value:
78.9 % Calcite+Dolomite
84.2 % Calcite in Carbonate
Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian
100% Other Rock Materials
Chert, Quartz, Clay, etc.
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
50%
50%
80%
95%
100% Dolomite
90%
50%
90%
95%
100% Calcite
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
1 Calcitic Dolomite
13 Dolomitic Limestone
9 Calcite Limestone
Magnesian Limestone
1 High-Calcium Limestone
All Other Limestone Units
High-Calcium Limestone
Magnesian Limestone
Sample Locations

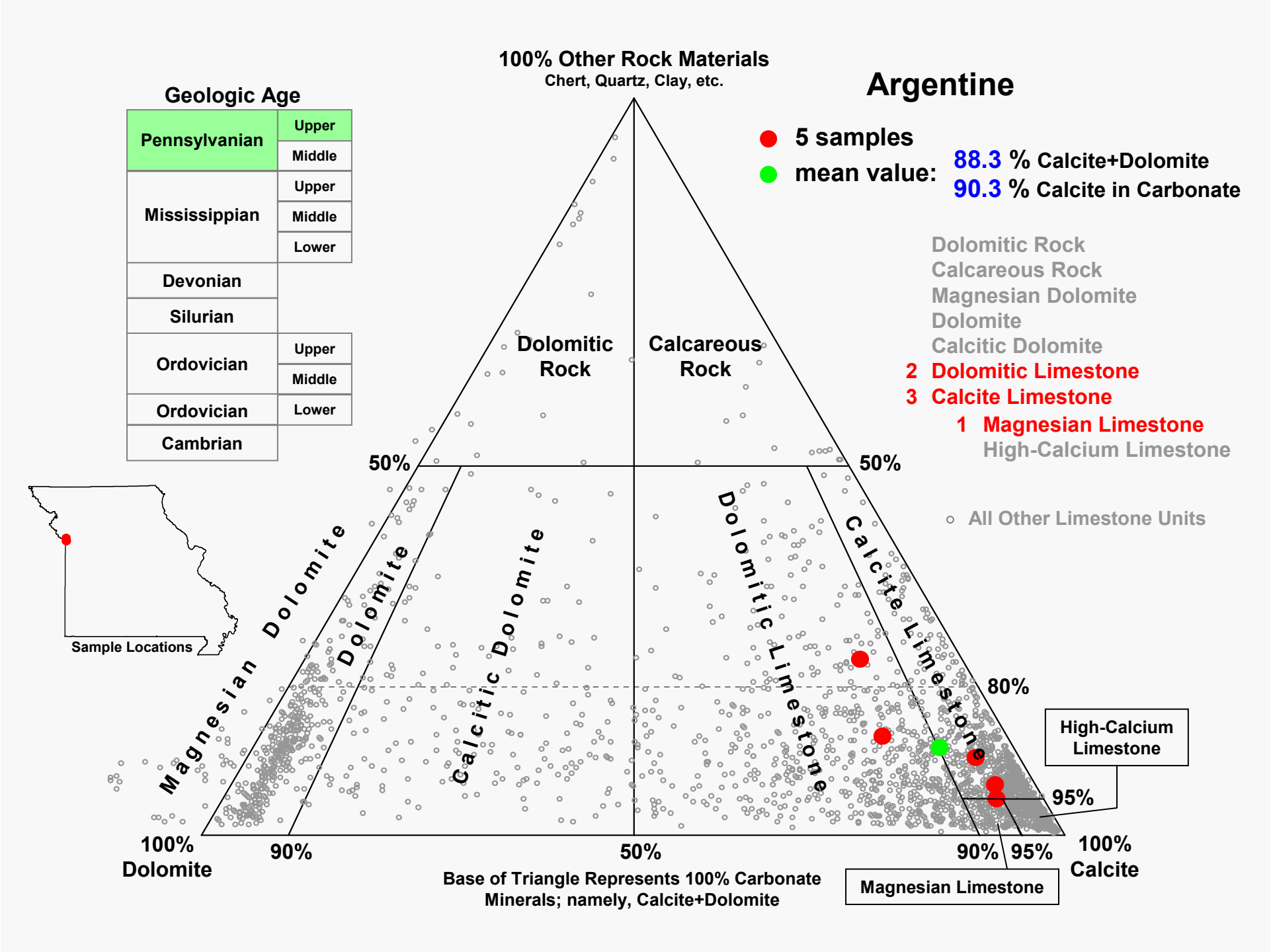

Amazonia
4 samples
mean value:
95.9 % Calcite+Dolomite
96.9 % Calcite in Carbonate
Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian
100% Other Rock Materials
Chert, Quartz, Clay, etc.
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
50%
50%
80%
95%
100% Dolomite
90%
50%
90%
95%
100% Calcite
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
4 Calcite Limestone
Magnesian Limestone
3 High-Calcium Limestone
All Other Limestone Units
High-Calcium Limestone
Magnesian Limestone
Sample Locations

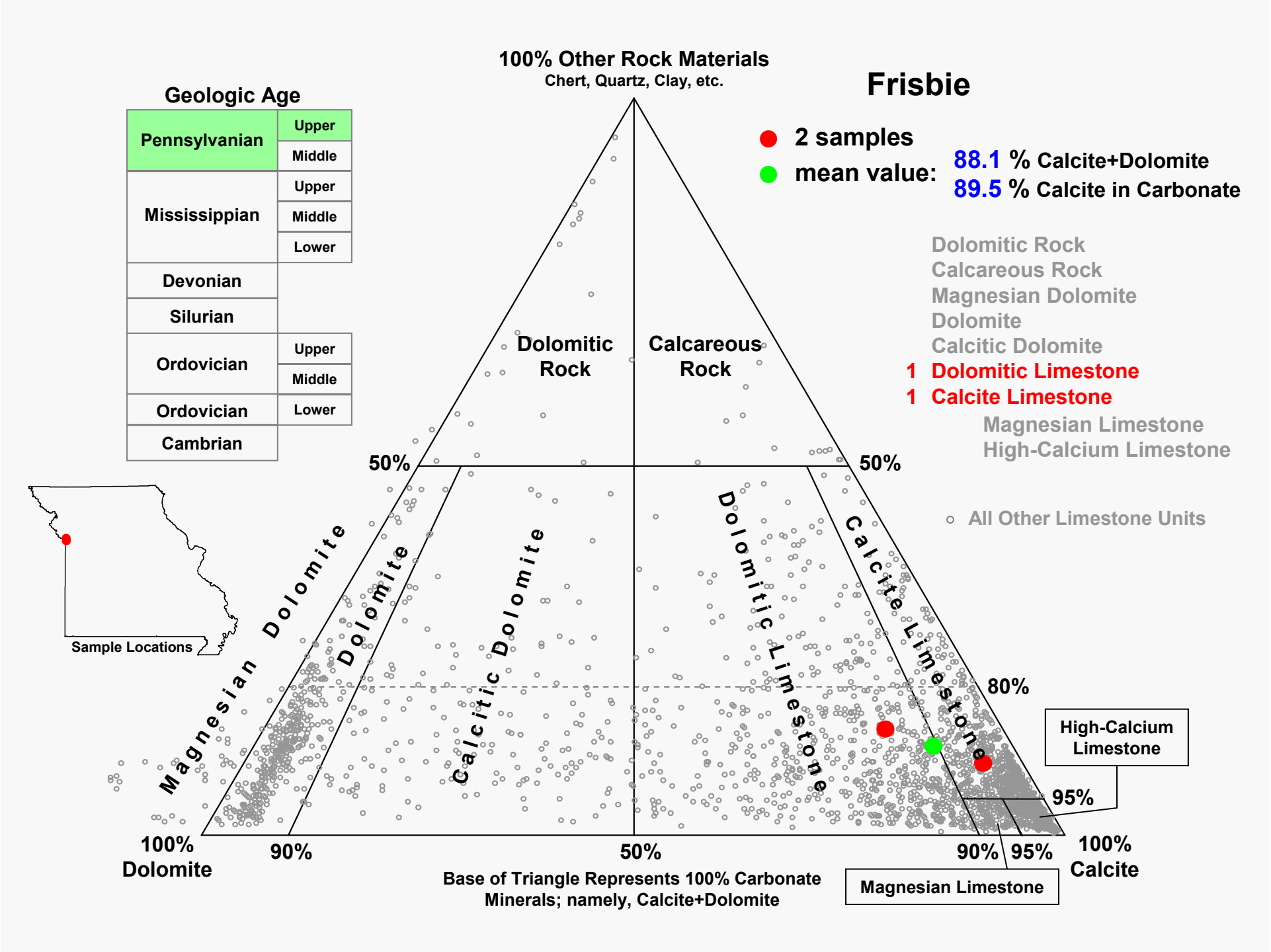

Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian
100% Other Rock Materials
Chert, Quartz, Clay, etc.
Iatan
3 samples
mean value:
93.1 % Calcite+Dolomite
96.8 % Calcite in Carbonate
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
3 Calcite Limestone
Magnesian Limestone
High-Calcium Limestone
All Other Limestone Units
Dolomitic Rock
Calcareous Rock
50%
50%
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
80%
95%
High-Calcium Limestone
Magnesian Limestone
Sample Locations
100% Dolomite
90%
50%
90%
95%
100% Calcite
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite

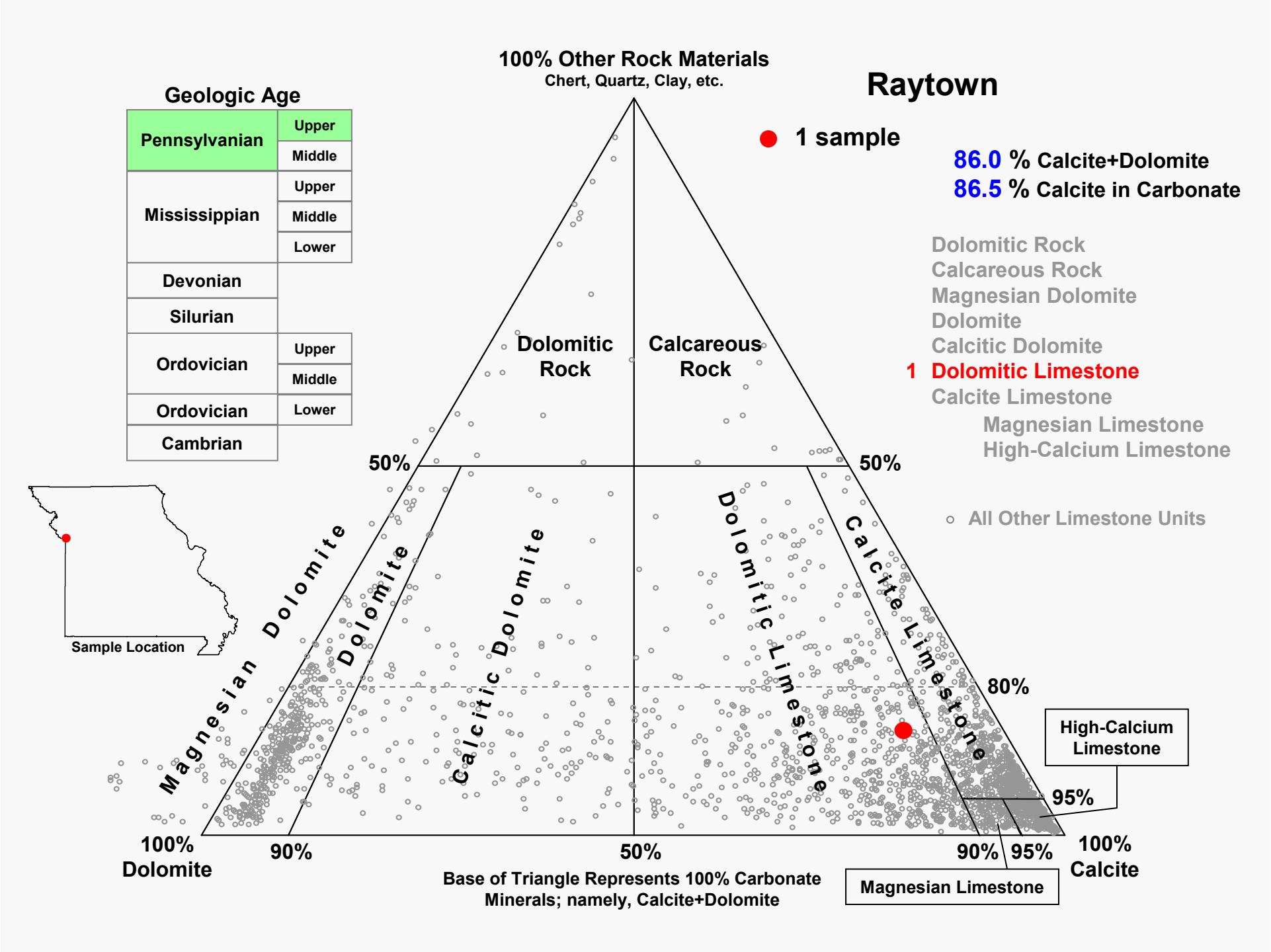

Stoner
39 samples
mean value:
86.9 % Calcite+Dolomite
88.2 % Calcite in Carbonate
Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian
100% Other Rock Materials
Chert, Quartz, Clay, etc.
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
17 Dolomitic Limestone
22 Calcite Limestone
Magnesian Limestone
2 High-Calcium Limestone
All Other Limestone Units
50%
50%
80%
95%
High-Calcium Limestone
Magnesian Limestone
100% Dolomite
90%
50%
90%
95%
100% Calcite
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite
Sample Locations


Captain Creek
3 samples
mean value:
86.3 % Calcite+Dolomite
92.8 % Calcite in Carbonate
Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian
100% Other Rock Materials
Chert, Quartz, Clay, etc.
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
50%
50%
80%
95%
100% Dolomite
90%
50%
90%
95%
100% Calcite
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite
High-Calcium Limestone
Magnesian Limestone
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
1 Dolomitic Limestone
2 Calcite Limestone
Magnesian Limestone
High-Calcium Limestone
All Other Limestone Units
Sample Locations


Spring Hill
16 samples
mean value:
82.2 % Calcite+Dolomite
82.9 % Calcite in Carbonate
Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian
100% Other Rock Materials
Chert, Quartz, Clay, etc.
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
1 Calcitic Dolomite
9 Dolomitic Limestone
6 Calcite Limestone
Magnesian Limestone
High-Calcium Limestone
All Other Limestone Units
50%
50%
80%
95%
100% Dolomite
90%
50%
90%
95%
100% Calcite
High-Calcium Limestone
Magnesian Limestone
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite
Sample Locations


Argentine
5 samples
mean value:
88.3 % Calcite+Dolomite
90.3 % Calcite in Carbonate
Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian
100% Other Rock Materials
Chert, Quartz, Clay, etc.
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
50%
50%
80%
95%
100% Dolomite
90%
50%
90%
95%
100% Calcite
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite
High-Calcium Limestone
Magnesian Limestone
Sample Locations
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
2 Dolomitic Limestone
3 Calcite Limestone
1 Magnesian Limestone
High-Calcium Limestone
All Other Limestone Units

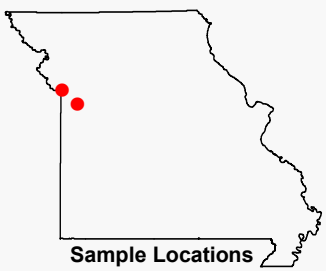

Frisbie
2 samples
mean value:
88.1 % Calcite+Dolomite
89.5 % Calcite in Carbonate
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
1 Dolomitic Limestone
1 Calcite Limestone
Magnesian Limestone
High-Calcium Limestone
All Other Limestone Units
100% Other Rock Materials
Chert, Quartz, Clay, etc.
Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
50%
50%
80%
95%
100% Dolomite
90%
50%
90%
95%
100% Calcite
High-Calcium Limestone
Magnesian Limestone
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite
Sample Locations

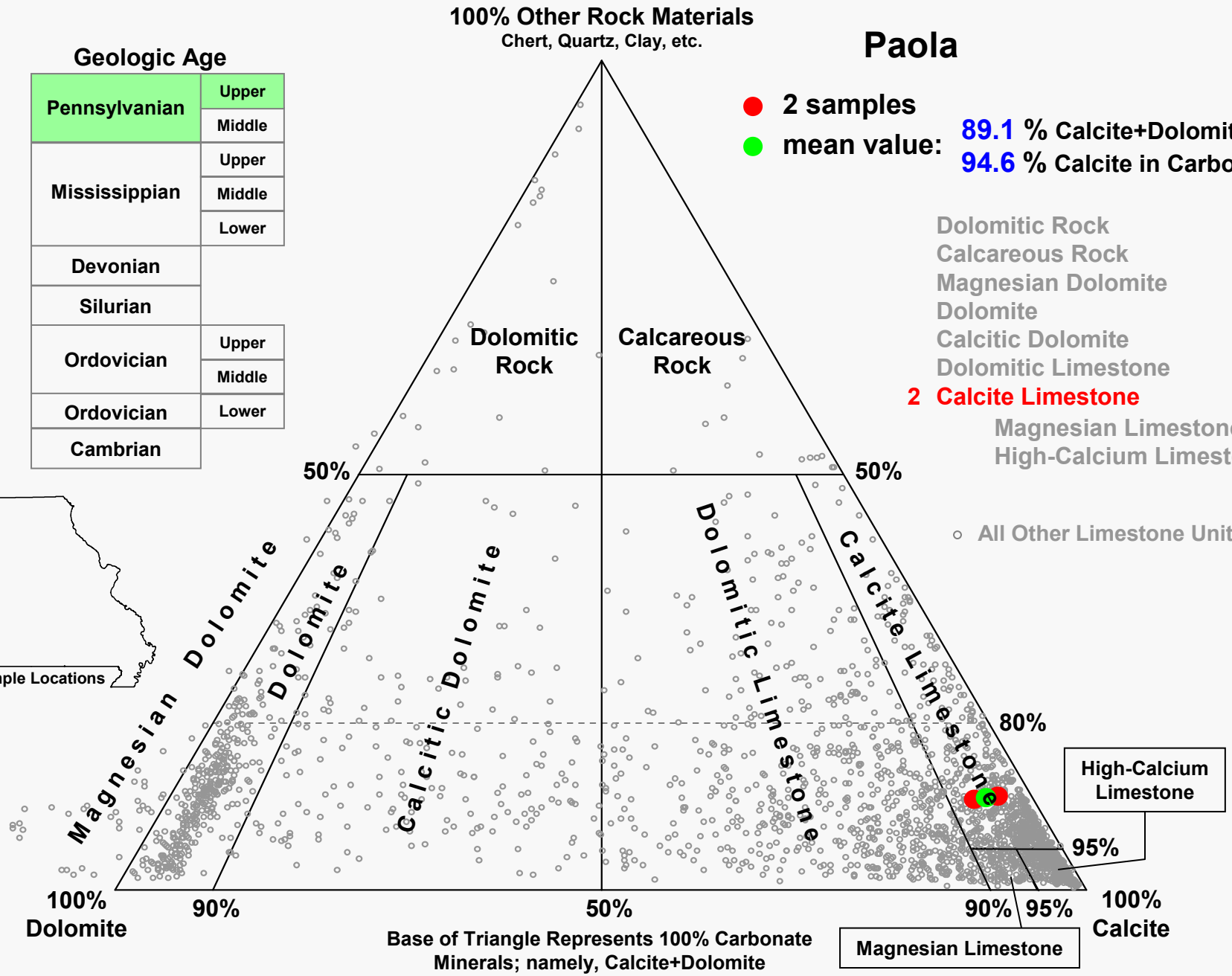

Raytown
1 sample
86.0 % Calcite+Dolomite
86.5 % Calcite in Carbonate
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
1 Dolomitic Limestone
Calcite Limestone
Magnesian Limestone
High-Calcium Limestone
All Other Limestone Units
100% Other Rock Materials
Chert, Quartz, Clay, etc.
Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian
Dolomitic Rock
Calcareous Rock
50%
50%
80%
95%
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
High-Calcium Limestone
Magnesian Limestone
100% Dolomite
90%
50%
90%
95%
100% Calcite
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite
Sample Location

Paola

Geologic Age

Pennsylvanian	Upper
	Middle
Mississippian	Upper
	Middle
	Lower
Devonian	
Silurian	
Ordovician	Upper
	Middle
Ordovician	Lower
Cambrian	





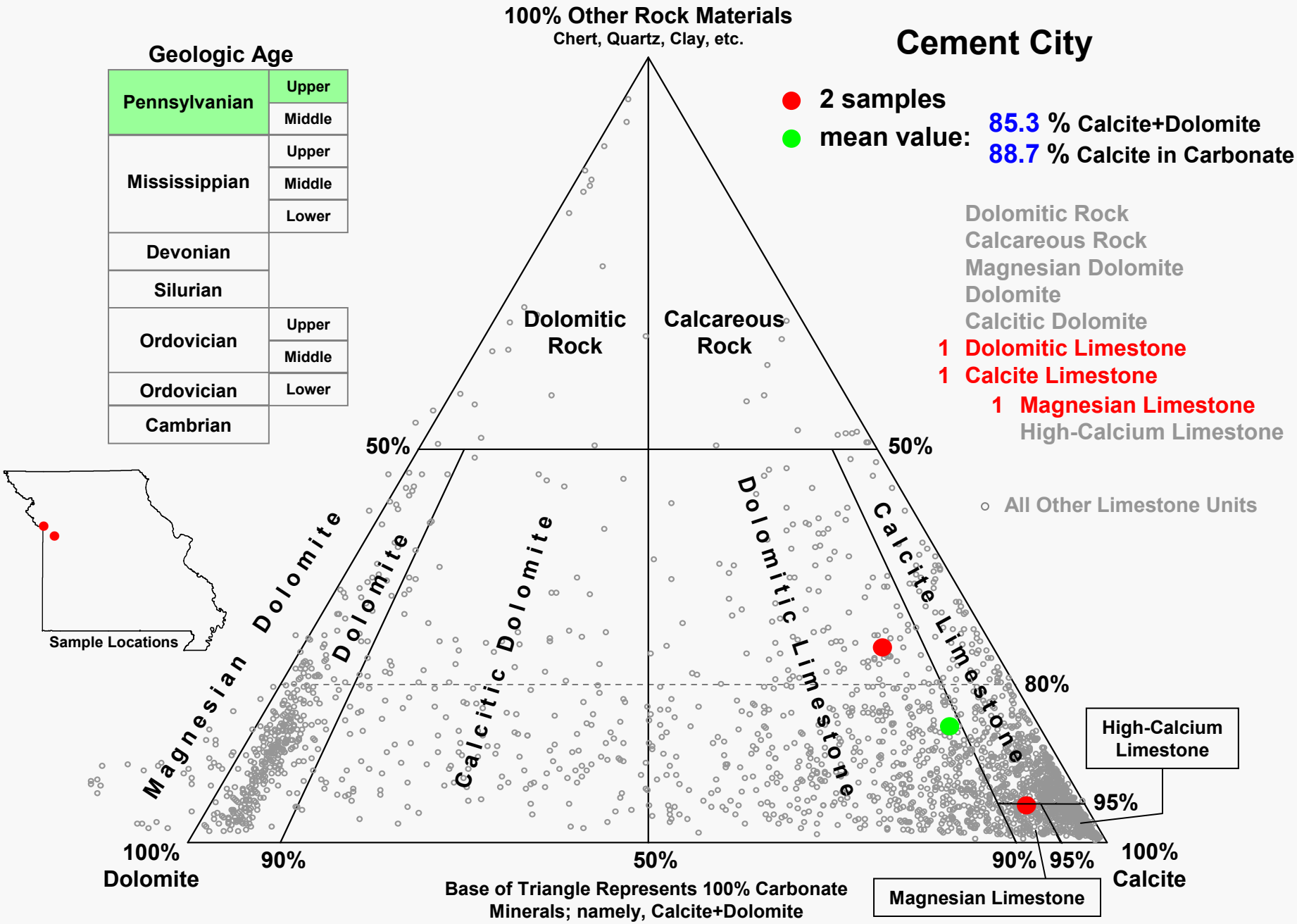
● 2 samples

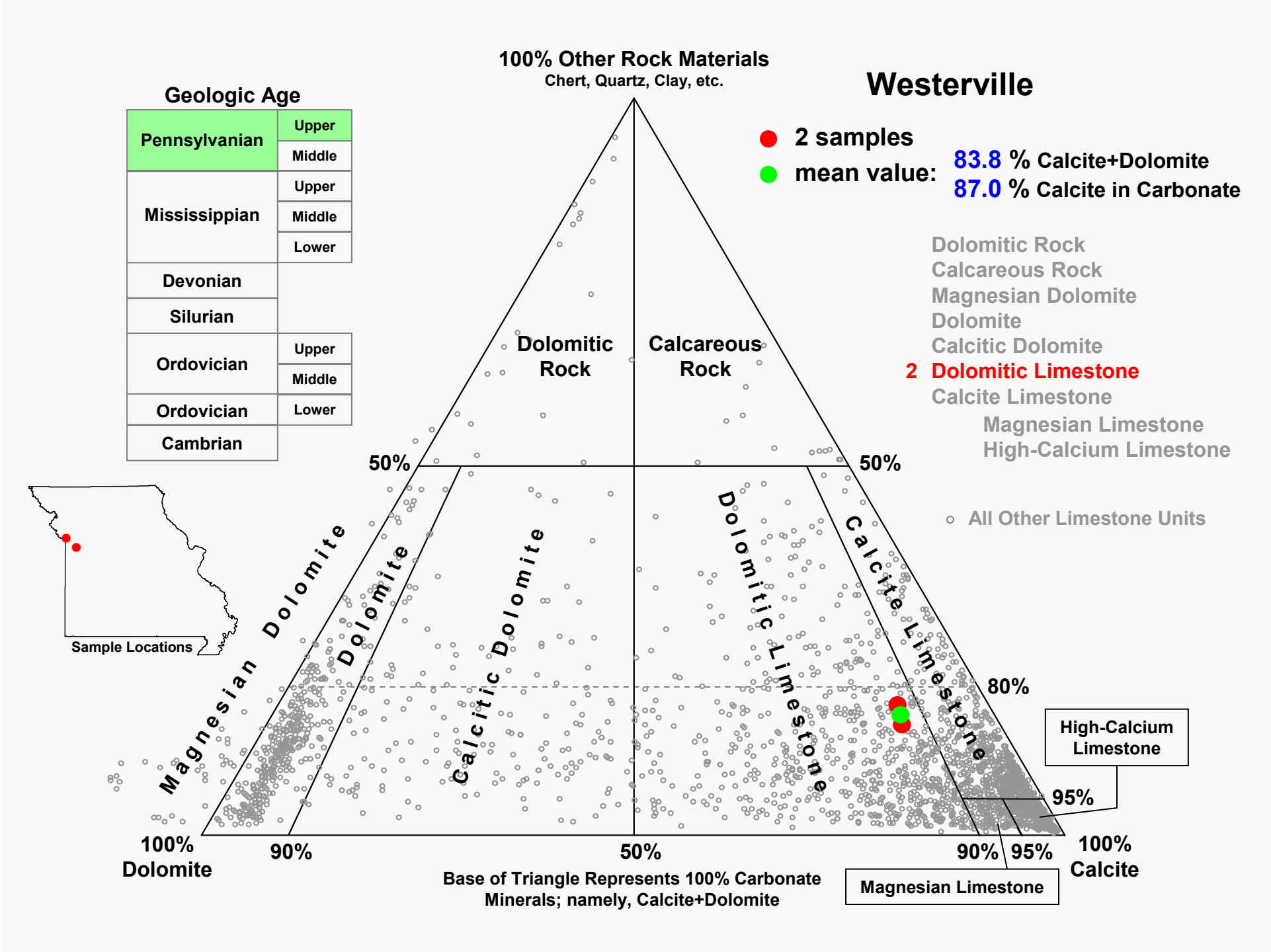
● mean value: 89.1 % Calcite+Dolomite
94.6 % Calcite in Carbonate

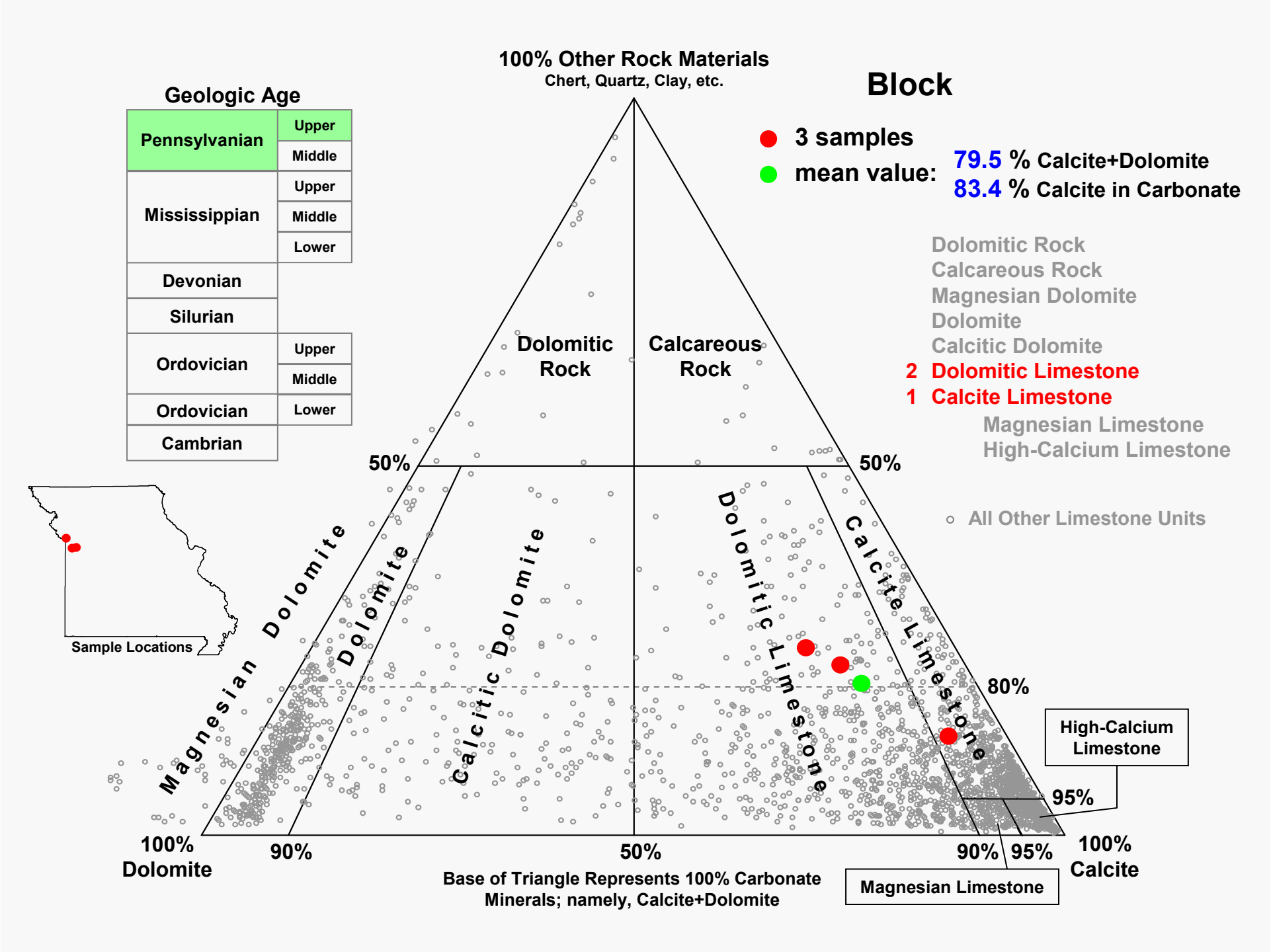
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
2 Calcite Limestone
Magnesian Limestone
High-Calcium Limestone

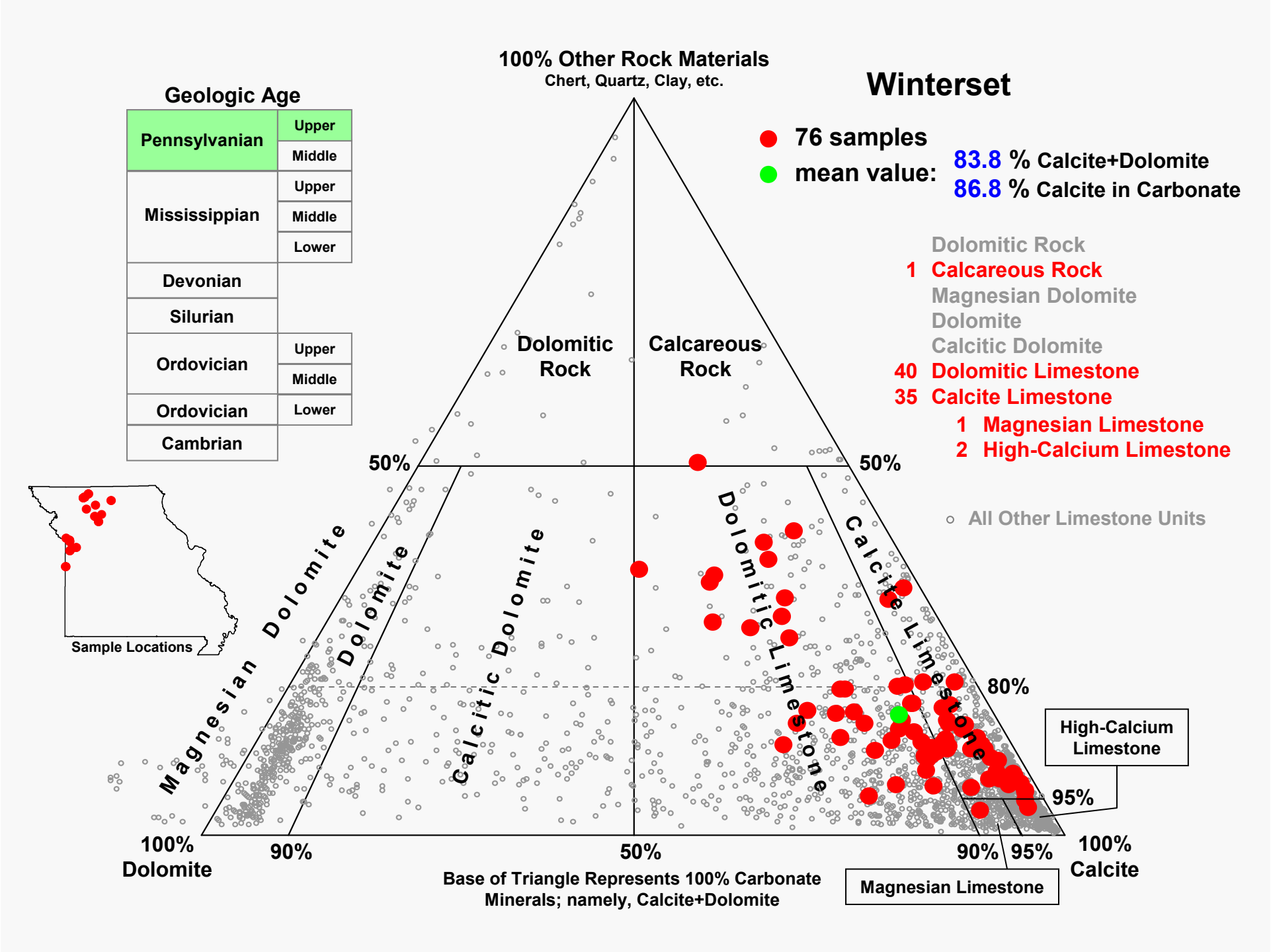
○ All Other Limestone Units

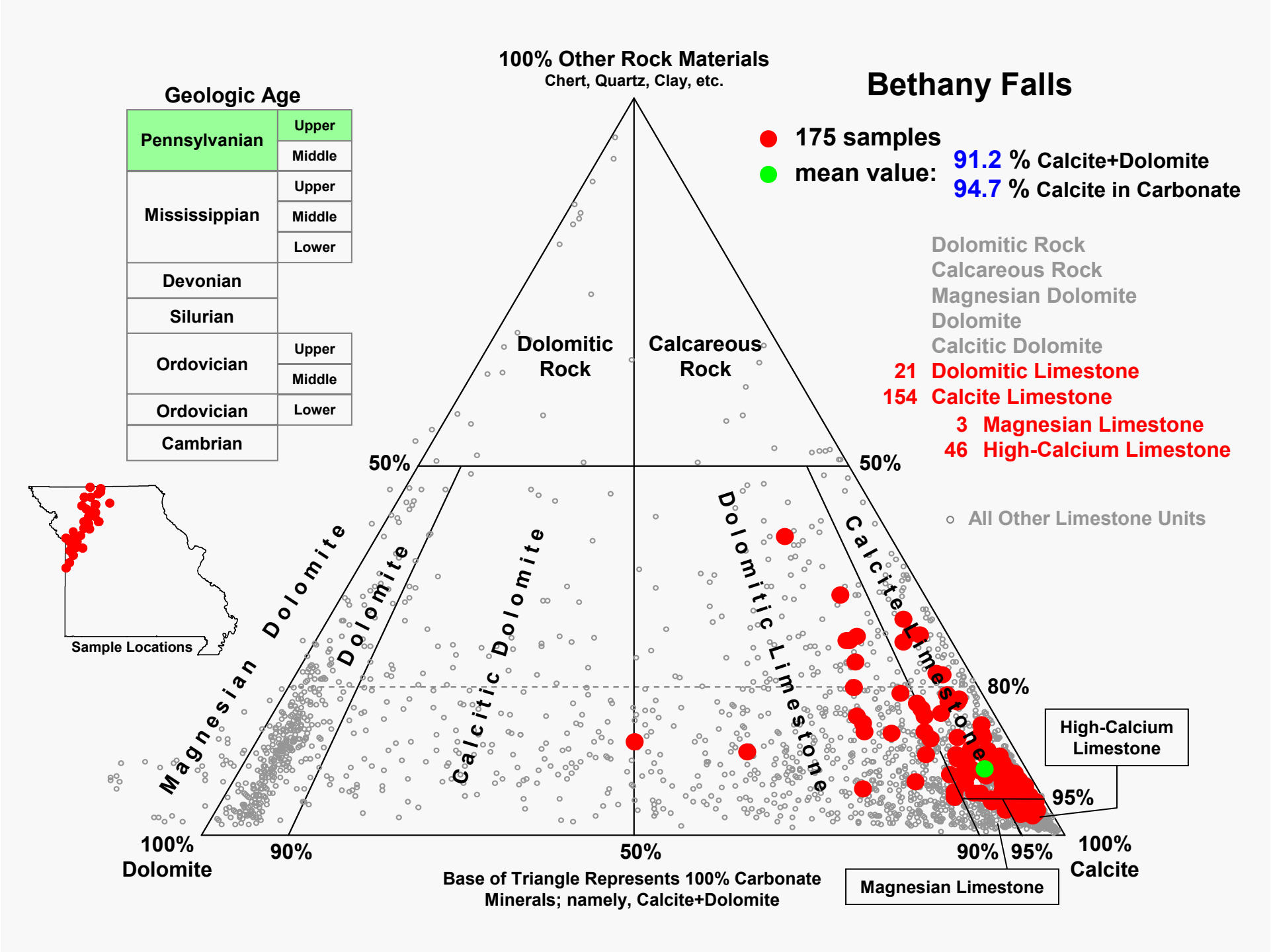
Cement City


Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian
100% Other Rock Materials
Chert, Quartz, Clay, etc.
2 samples
mean value:
85.3 % Calcite+Dolomite
88.7 % Calcite in Carbonate
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
1 Dolomitic Limestone
1 Calcite Limestone
1 Magnesian Limestone
High-Calcium Limestone
All Other Limestone Units
Dolomitic Rock
Calcareous Rock
50%
50%
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
80%
95%
High-Calcium Limestone
Magnesian Limestone
Sample Locations
100% Dolomite
90%
50%
90%
95%
100% Calcite
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite

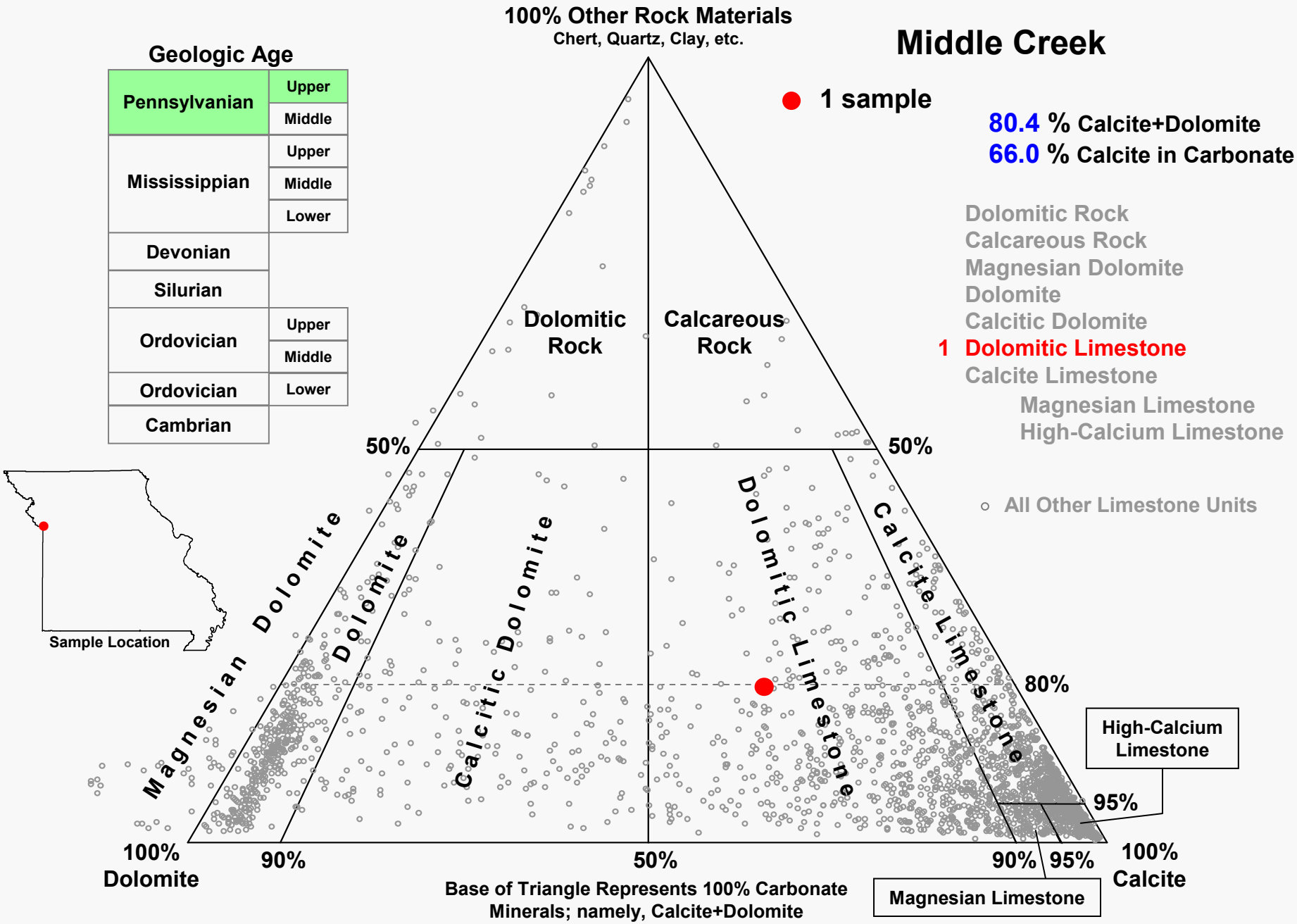

Westerville
2 samples
mean value:
83.8 % Calcite+Dolomite
87.0 % Calcite in Carbonate
Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian
100% Other Rock Materials
Chert, Quartz, Clay, etc.
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
50%
50%
80%
95%
100% Dolomite
90%
50%
90%
95%
100% Calcite
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite
High-Calcium Limestone
Magnesian Limestone
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
2 Dolomitic Limestone
Calcite Limestone
Magnesian Limestone
High-Calcium Limestone
All Other Limestone Units
Sample Locations

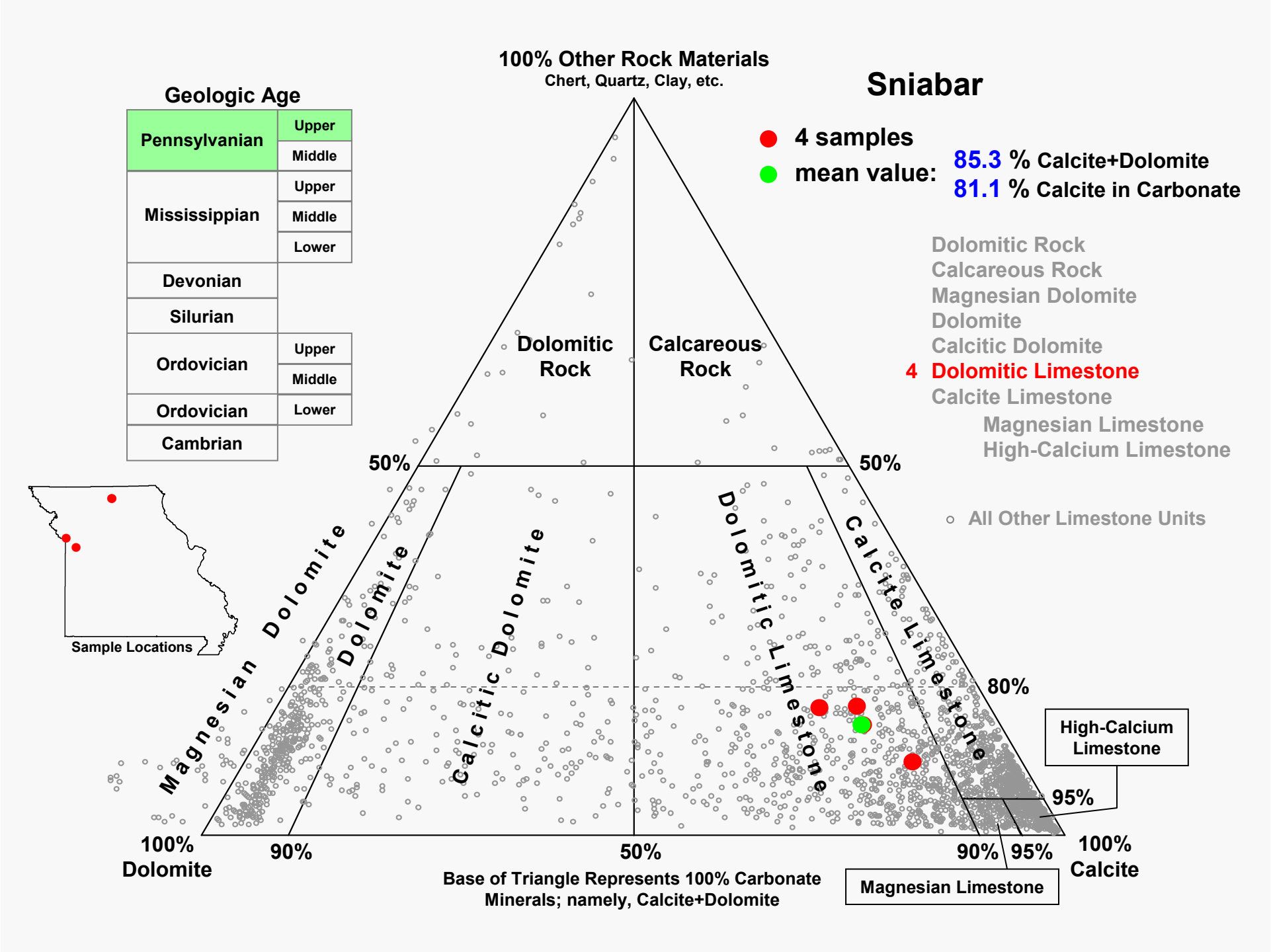

Block
3 samples
mean value:
79.5 % Calcite+Dolomite
83.4 % Calcite in Carbonate
Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian
100% Other Rock Materials
Chert, Quartz, Clay, etc.
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
50%
50%
80%
95%
100% Dolomite
90%
50%
90%
95%
100% Calcite
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite
High-Calcium Limestone
Magnesian Limestone
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
2 Dolomitic Limestone
1 Calcite Limestone
Magnesian Limestone
High-Calcium Limestone
All Other Limestone Units
Sample Locations

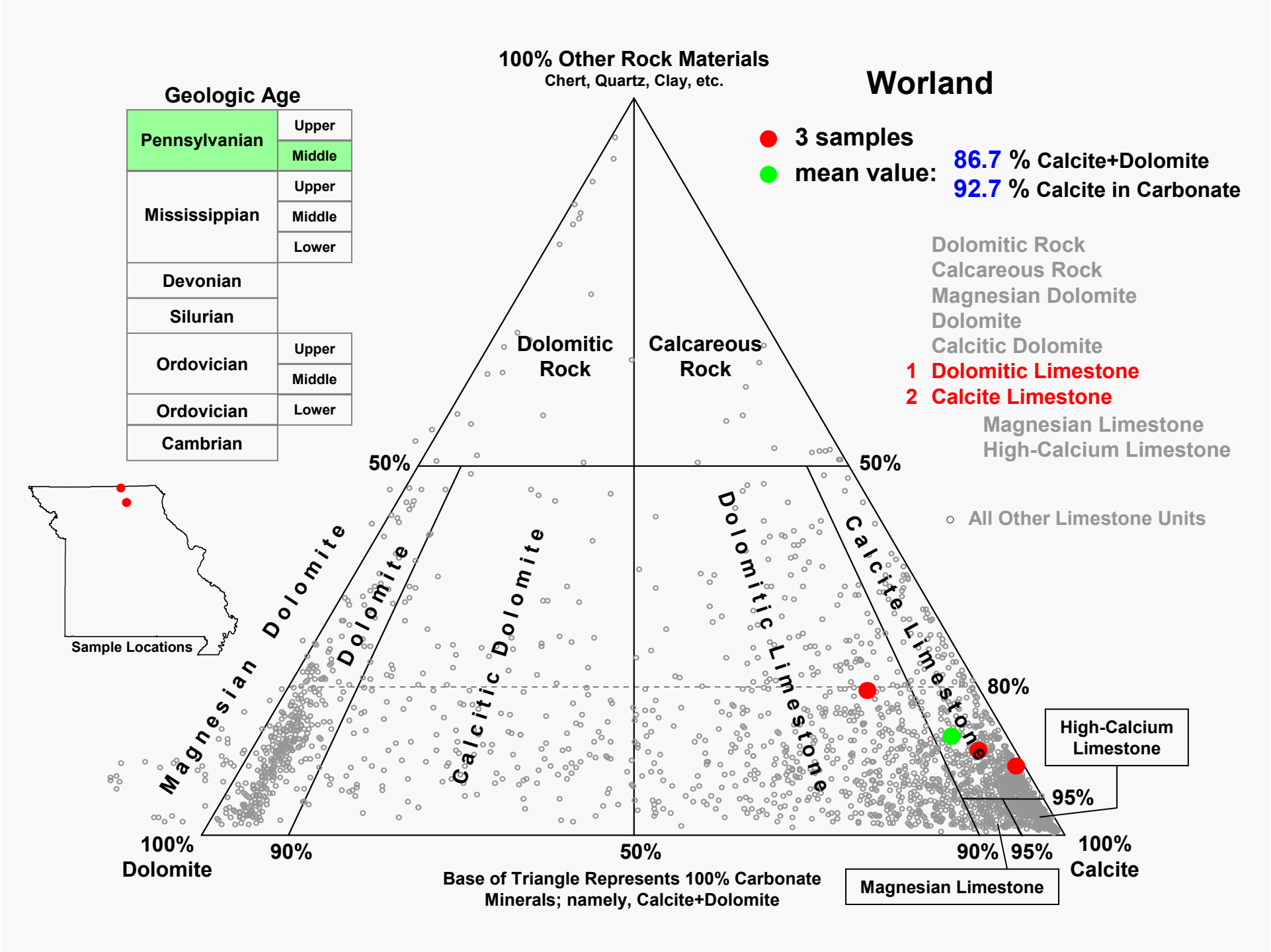

Winterset
76 samples
mean value:
83.8 % Calcite+Dolomite
86.8 % Calcite in Carbonate
Dolomitic Rock
1 Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
40 Dolomitic Limestone
35 Calcite Limestone
1 Magnesian Limestone
2 High-Calcium Limestone
All Other Limestone Units
Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian
100% Other Rock Materials
Chert, Quartz, Clay, etc.
Dolomitic Rock
Calcareous Rock
50%
50%
80%
95%
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
High-Calcium Limestone
Magnesian Limestone
100% Dolomite
90%
50%
90%
95%
100% Calcite
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite
Sample Locations

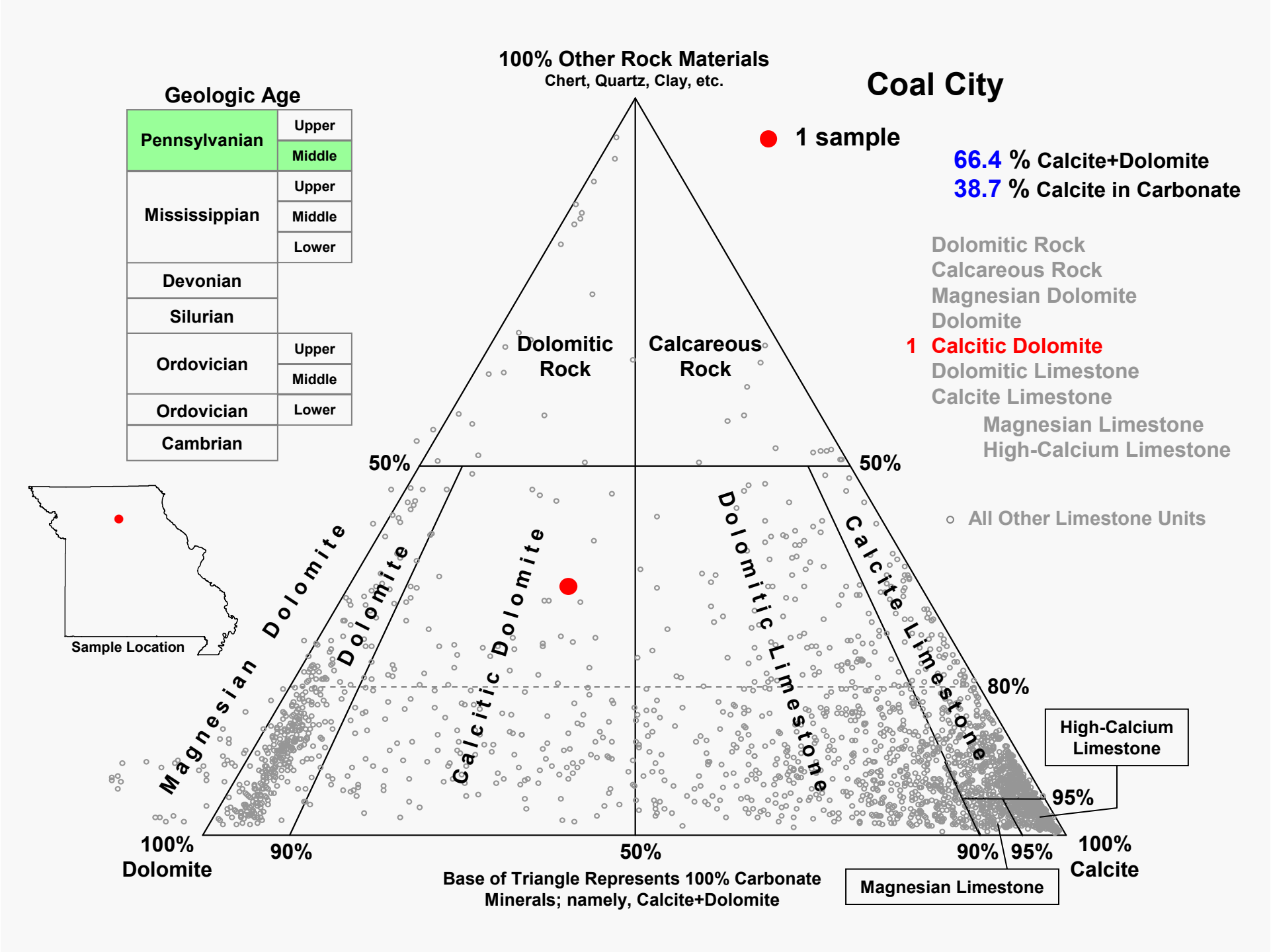

Bethany Falls
175 samples
mean value:
91.2 % Calcite+Dolomite
94.7 % Calcite in Carbonate
Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian
100% Other Rock Materials
Chert, Quartz, Clay, etc.
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
50%
50%
80%
95%
100% Dolomite
90%
50%
90%
95%
100% Calcite
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite
High-Calcium Limestone
Magnesian Limestone
Sample Locations
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
21 Dolomitic Limestone
154 Calcite Limestone
3 Magnesian Limestone
46 High-Calcium Limestone
All Other Limestone Units

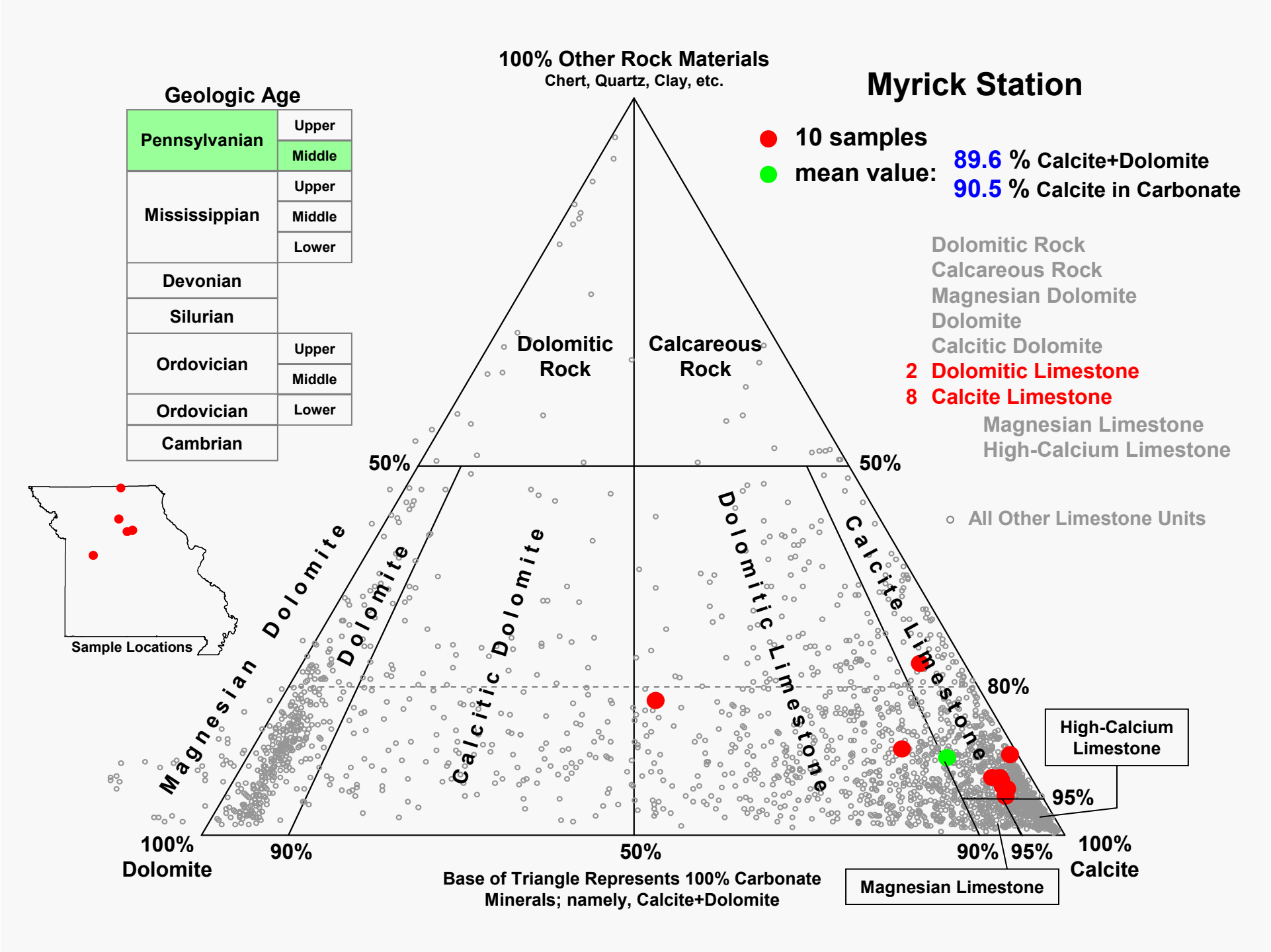
Middle Creek

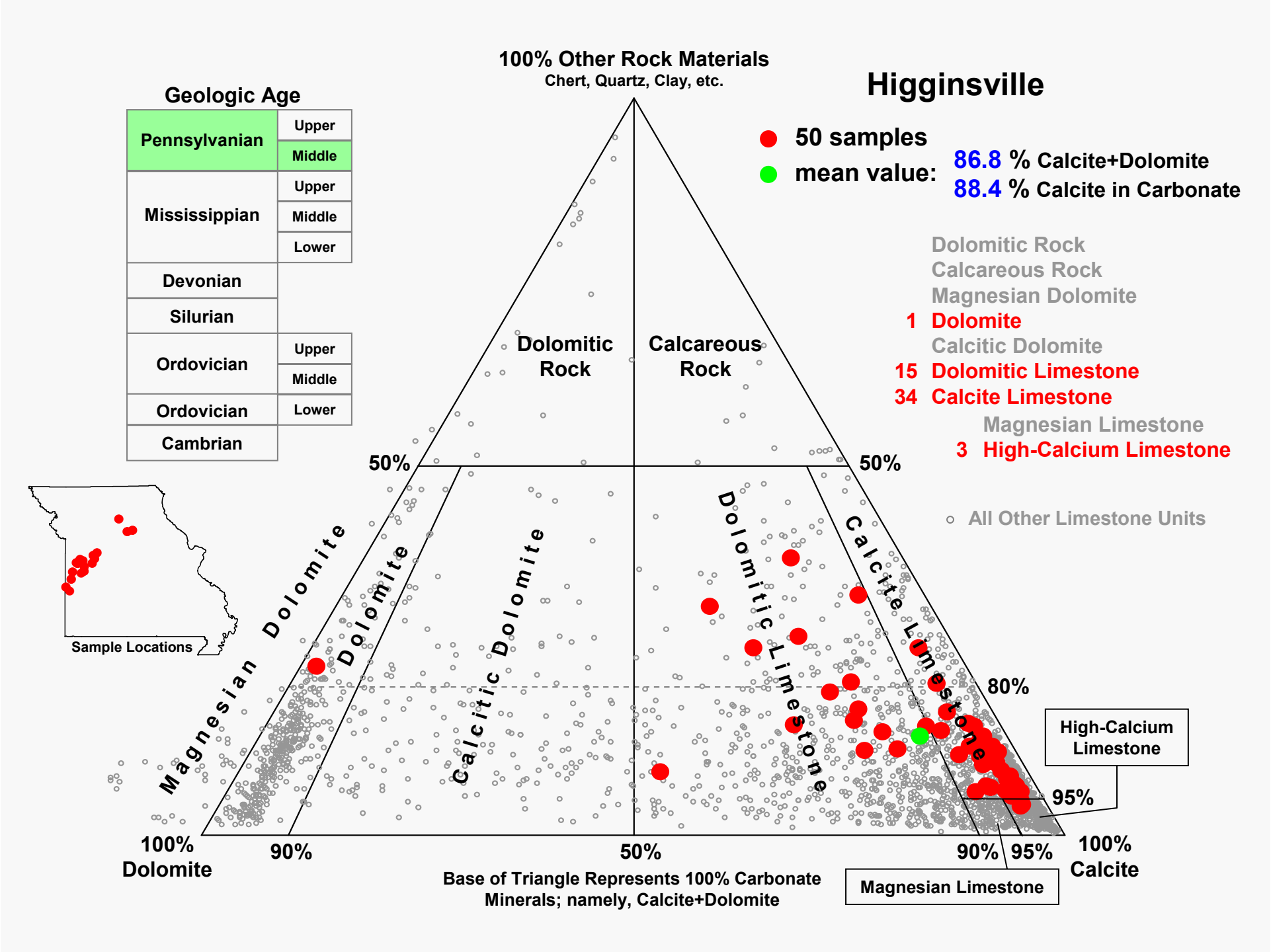


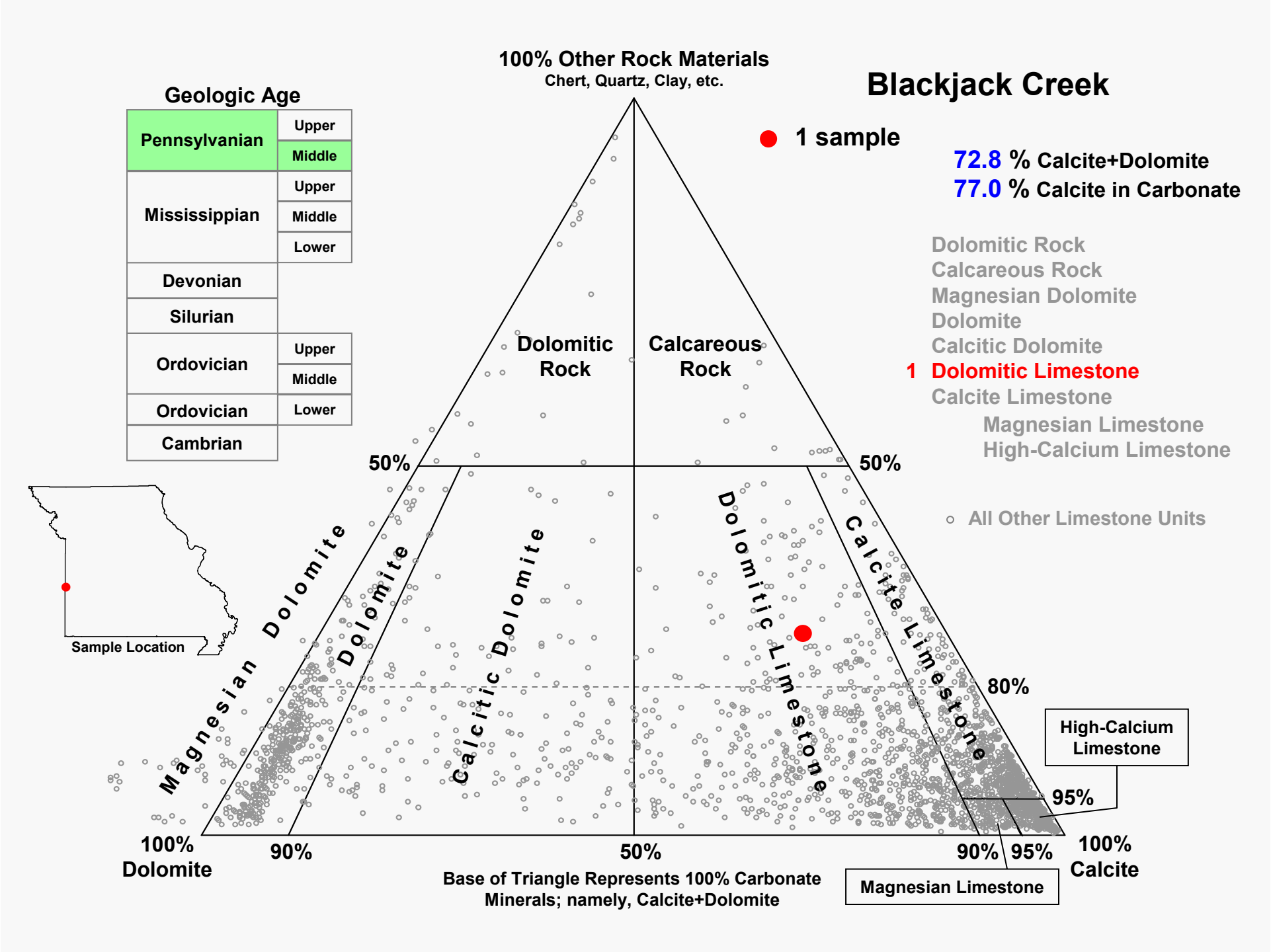

Sniabar
4 samples
mean value: 85.3 % Calcite+Dolomite
81.1 % Calcite in Carbonate
Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian
100% Other Rock Materials
Chert, Quartz, Clay, etc.
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
50%
50%
80%
95%
100% Dolomite
90%
50%
90%
95%
100% Calcite
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite
High-Calcium Limestone
Magnesian Limestone
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
4 Dolomitic Limestone
Calcite Limestone
Magnesian Limestone
High-Calcium Limestone
All Other Limestone Units
Sample Locations

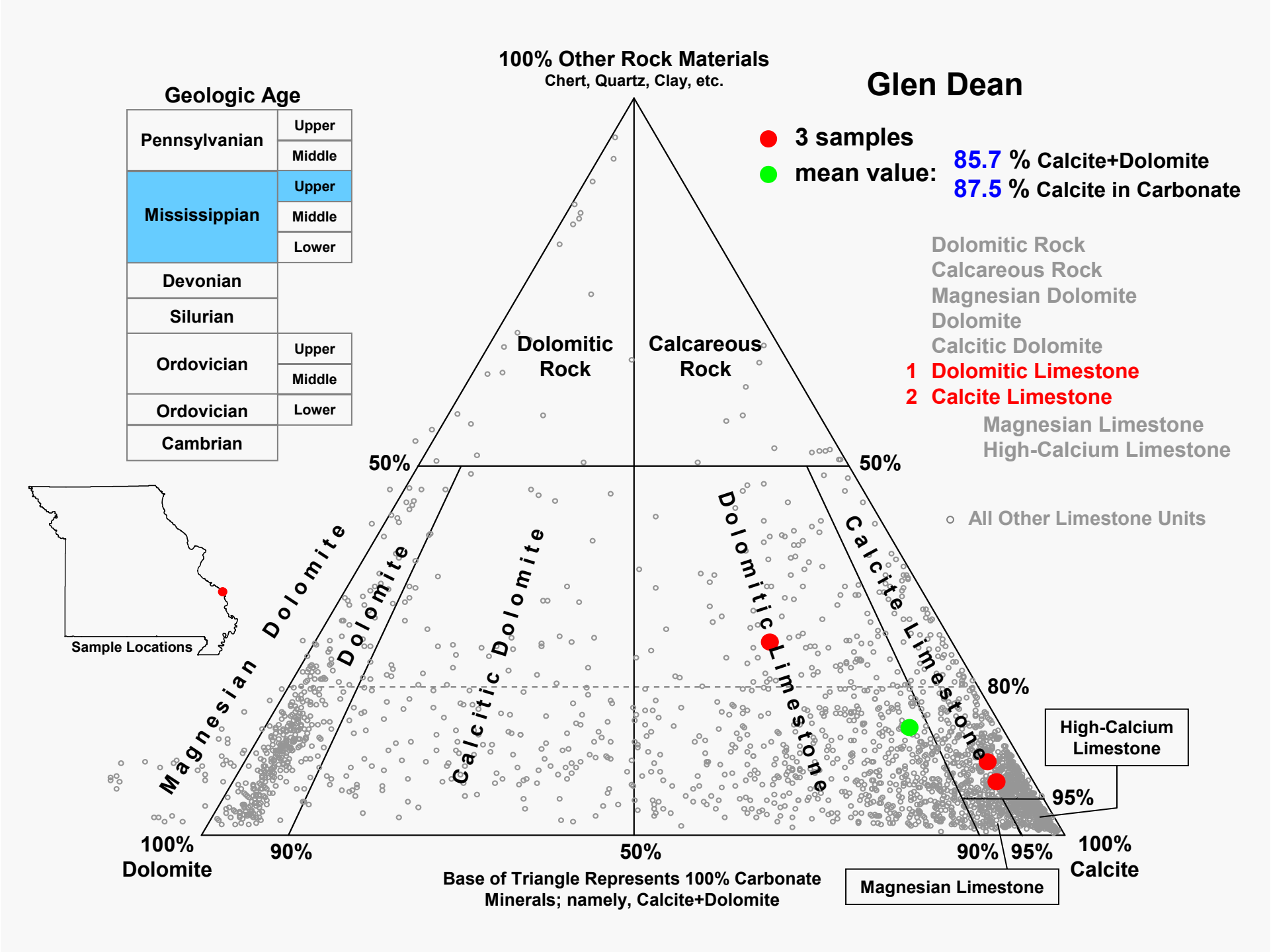

Worland
3 samples
mean value:
86.7 % Calcite+Dolomite
92.7 % Calcite in Carbonate
Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian
100% Other Rock Materials
Chert, Quartz, Clay, etc.
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
50%
50%
80%
95%
100% Dolomite
90%
50%
90%
95%
100% Calcite
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite
High-Calcium Limestone
Magnesian Limestone
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
1 Dolomitic Limestone
2 Calcite Limestone
Magnesian Limestone
High-Calcium Limestone
All Other Limestone Units
Sample Locations

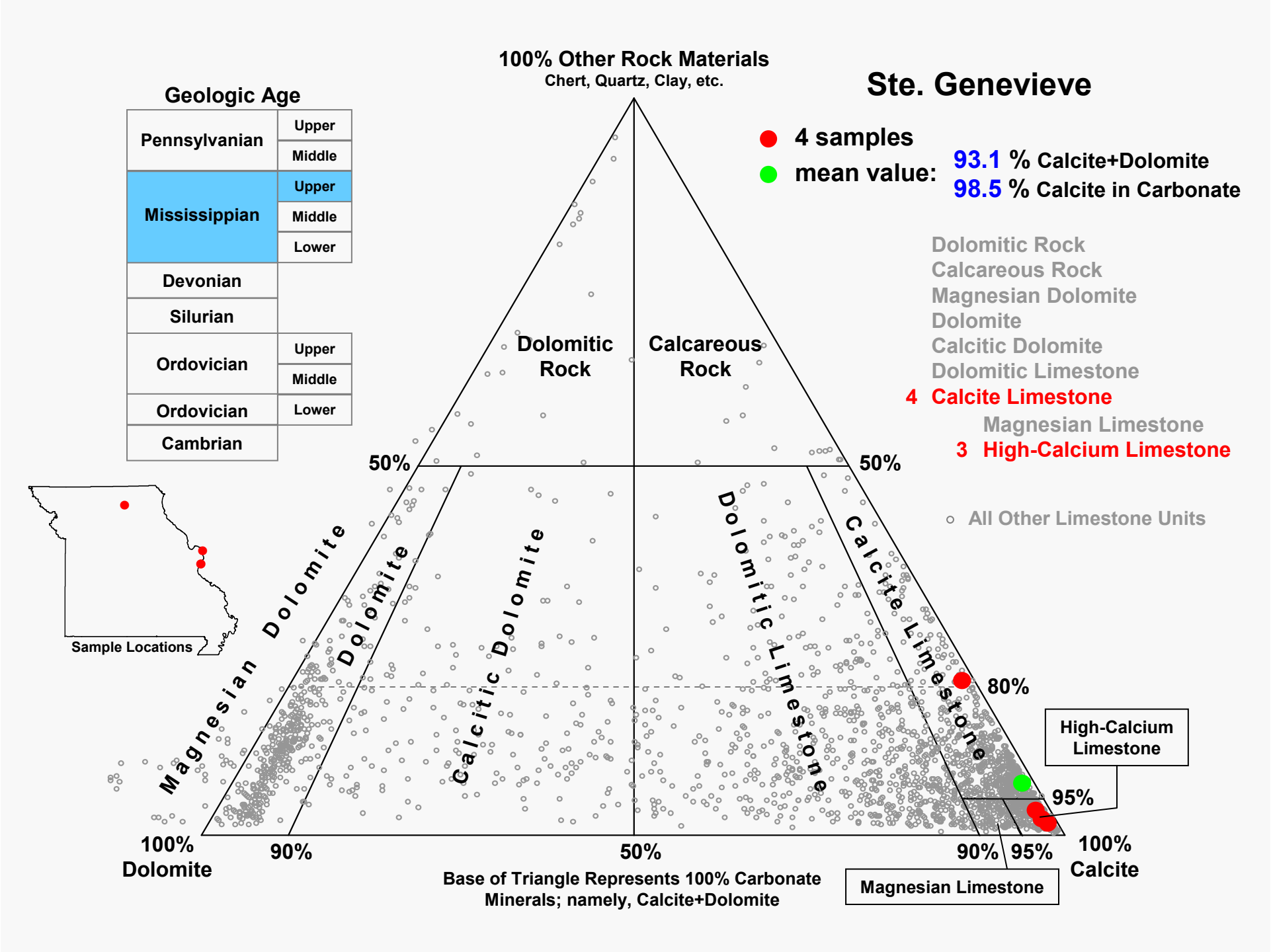

Coal City
1 sample
66.4 % Calcite+Dolomite
38.7 % Calcite in Carbonate
Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian
100% Other Rock Materials
Chert, Quartz, Clay, etc.
Dolomitic Rock
Calcareous Rock
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
1 Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
Magnesian Limestone
High-Calcium Limestone
All Other Limestone Units
50%
50%
80%
95%
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
High-Calcium Limestone
Magnesian Limestone
100% Dolomite
90%
50%
90%
95%
100% Calcite
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite
Sample Location

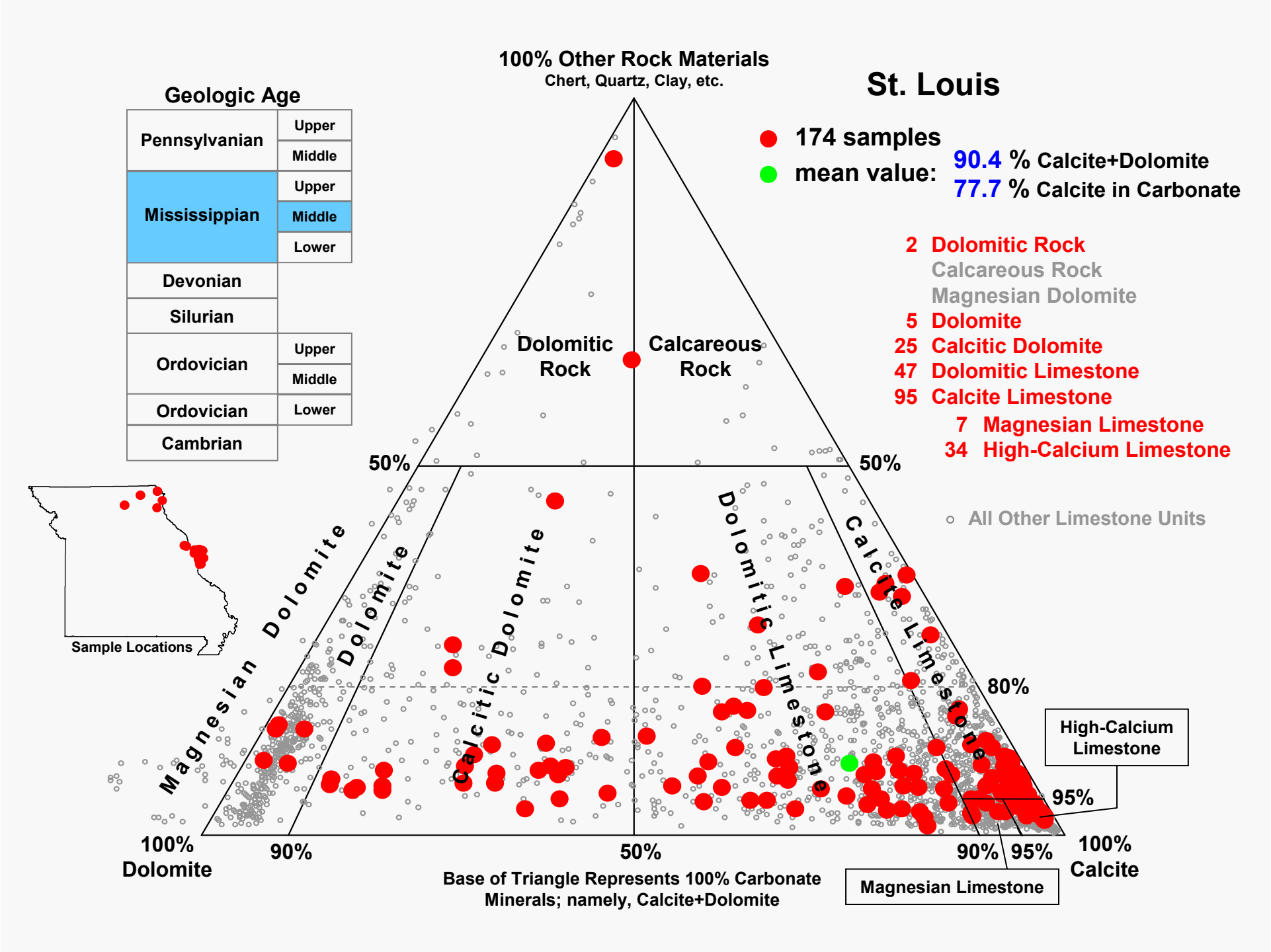

Myrick Station
10 samples
mean value:
89.6 % Calcite+Dolomite
90.5 % Calcite in Carbonate
Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian
100% Other Rock Materials
Chert, Quartz, Clay, etc.
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
50%
50%
80%
95%
100% Dolomite
90%
50%
90%
95%
100% Calcite
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
2 Dolomitic Limestone
8 Calcite Limestone
Magnesian Limestone
High-Calcium Limestone
All Other Limestone Units
High-Calcium Limestone
Magnesian Limestone
Sample Locations

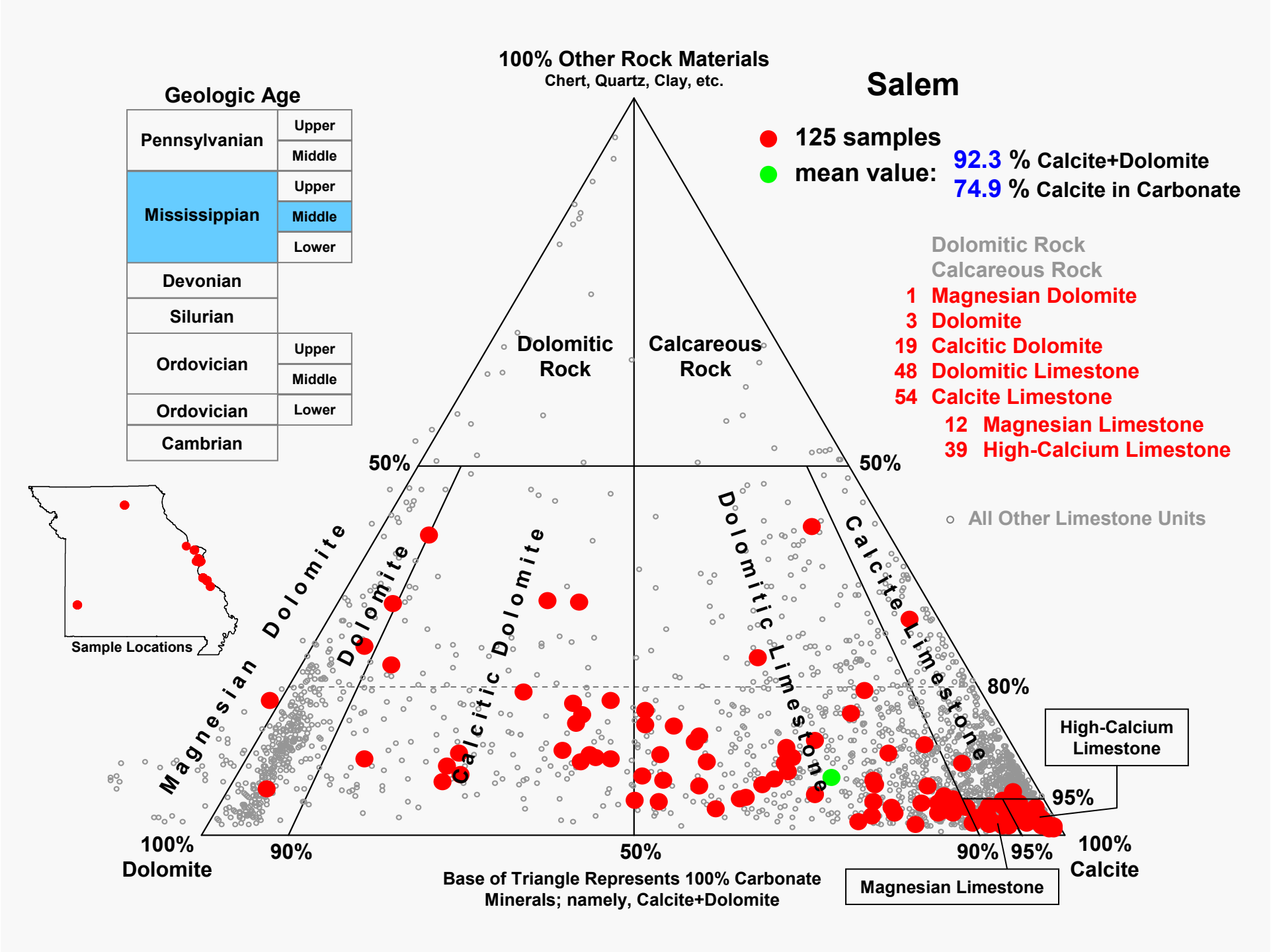

Higginsville
50 samples
mean value: 86.8 % Calcite+Dolomite
88.4 % Calcite in Carbonate
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
1 Dolomite
Calcitic Dolomite
15 Dolomitic Limestone
34 Calcite Limestone
Magnesian Limestone
3 High-Calcium Limestone
All Other Limestone Units
Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian
100% Other Rock Materials
Chert, Quartz, Clay, etc.
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
50%
50%
80%
95%
100% Dolomite
90%
50%
90%
95%
100% Calcite
High-Calcium Limestone
Magnesian Limestone
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite
Sample Locations

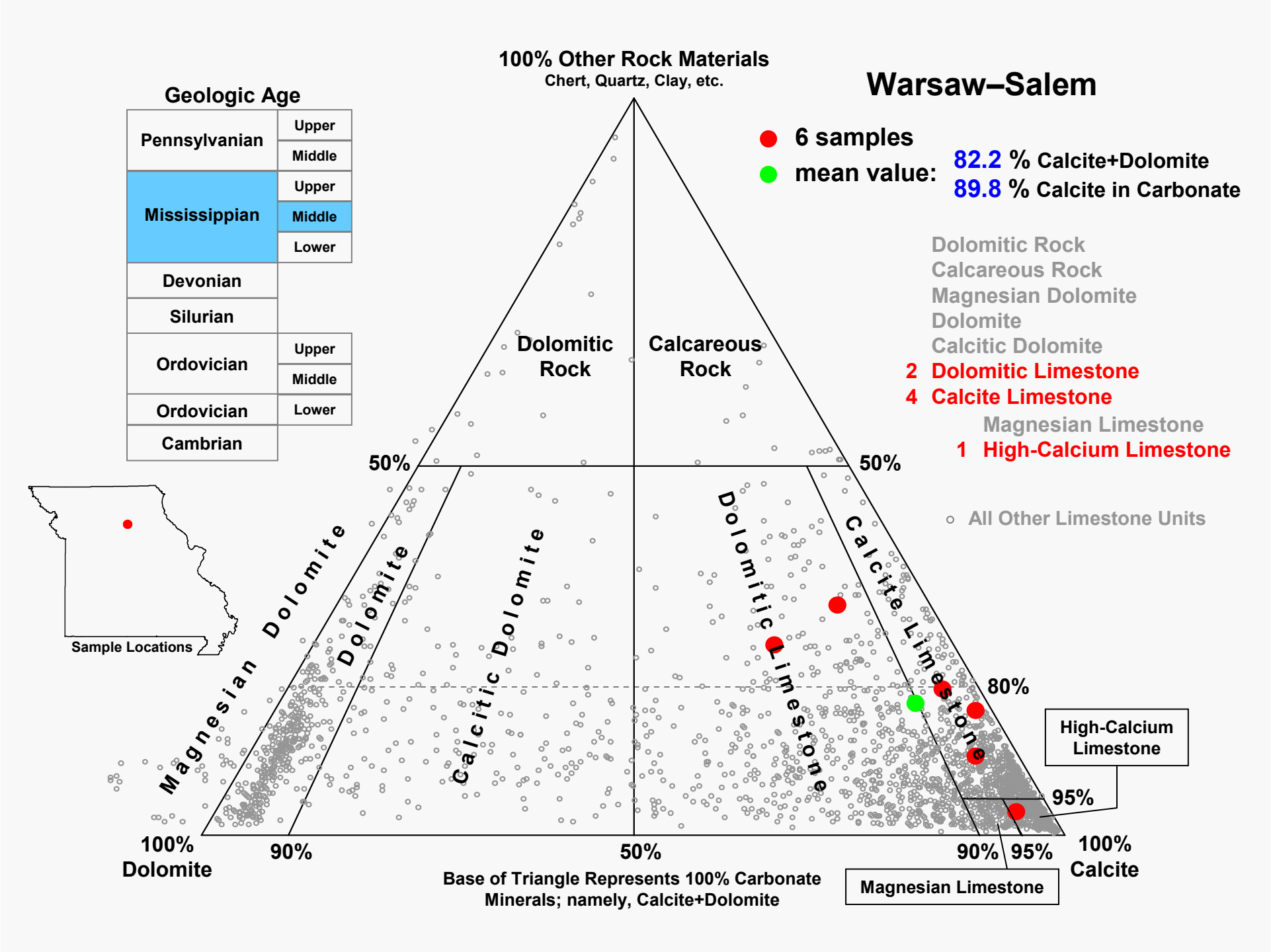

Blackjack Creek
1 sample
72.8 % Calcite+Dolomite
77.0 % Calcite in Carbonate
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
1 Dolomitic Limestone
Calcite Limestone
Magnesian Limestone
High-Calcium Limestone
All Other Limestone Units
100% Other Rock Materials
Chert, Quartz, Clay, etc.
Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian
Dolomitic Rock
Calcareous Rock
50%
50%
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
80%
95%
High-Calcium Limestone
Magnesian Limestone
100% Dolomite
90%
50%
90%
95%
100% Calcite
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite
Sample Location

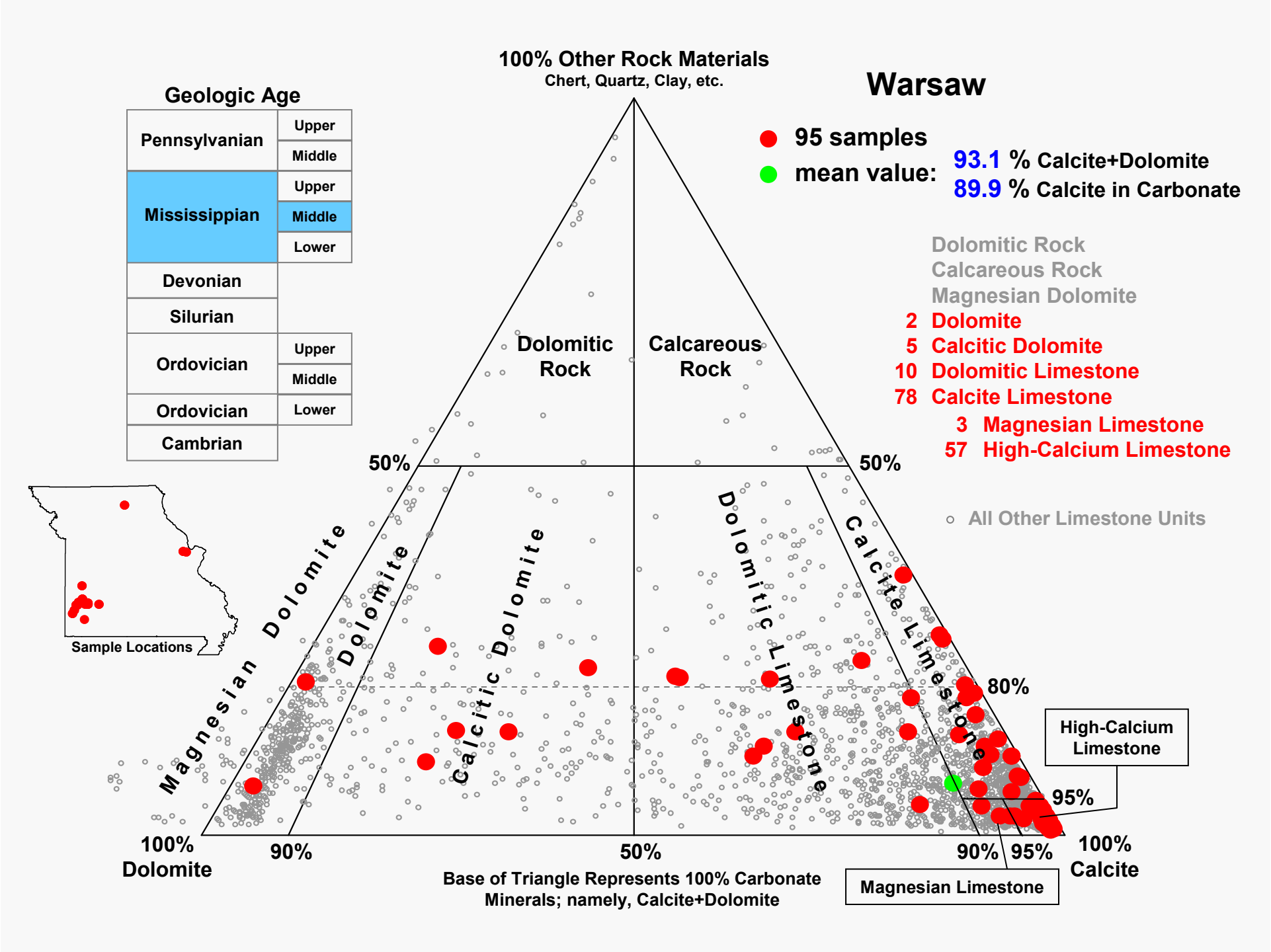

Glen Dean
3 samples
mean value:
85.7 % Calcite+Dolomite
87.5 % Calcite in Carbonate
Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian
100% Other Rock Materials
Chert, Quartz, Clay, etc.
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
50%
50%
80%
95%
100% Dolomite
90%
50%
90%
95%
100% Calcite
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite
High-Calcium Limestone
Magnesian Limestone
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
1 Dolomitic Limestone
2 Calcite Limestone
Magnesian Limestone
High-Calcium Limestone
All Other Limestone Units
Sample Locations

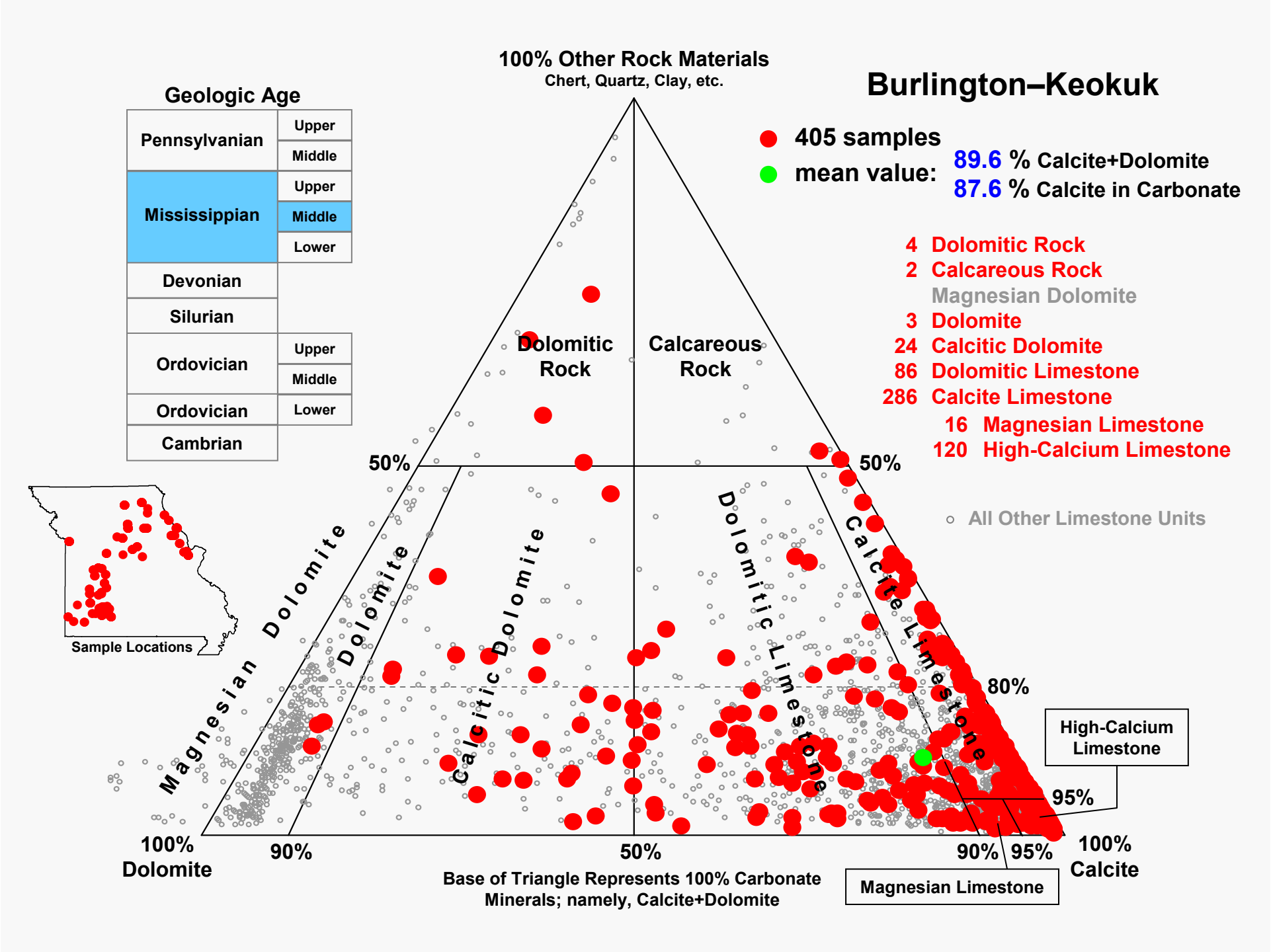

Ste. Genevieve
4 samples
mean value:
93.1 % Calcite+Dolomite
98.5 % Calcite in Carbonate
Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian
100% Other Rock Materials
Chert, Quartz, Clay, etc.
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
50%
50%
80%
95%
100% Dolomite
90%
50%
90%
95%
100% Calcite
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite
High-Calcium Limestone
Magnesian Limestone
Sample Locations
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
4 Calcite Limestone
Magnesian Limestone
3 High-Calcium Limestone
All Other Limestone Units

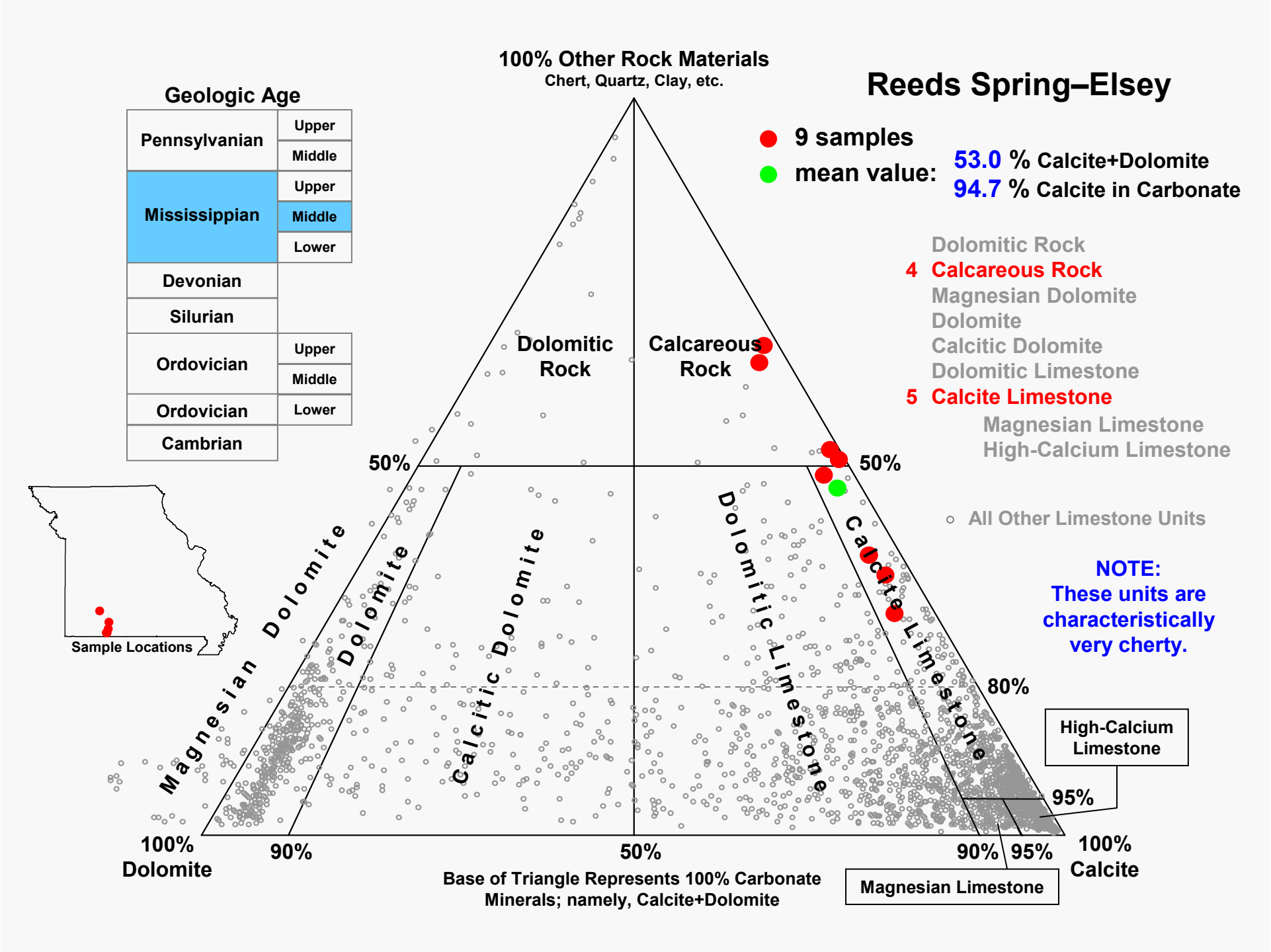

St. Louis
174 samples
mean value:
90.4 % Calcite+Dolomite
77.7 % Calcite in Carbonate
2 Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
5 Dolomite
25 Calcitic Dolomite
47 Dolomitic Limestone
95 Calcite Limestone
7 Magnesian Limestone
34 High-Calcium Limestone
All Other Limestone Units
100% Other Rock Materials
Chert, Quartz, Clay, etc.
Dolomitic Rock
Calcareous Rock
50%
50%
80%
95%
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
High-Calcium Limestone
Magnesian Limestone
100% Dolomite
90%
50%
90%
95%
100% Calcite
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite
Sample Locations
Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian

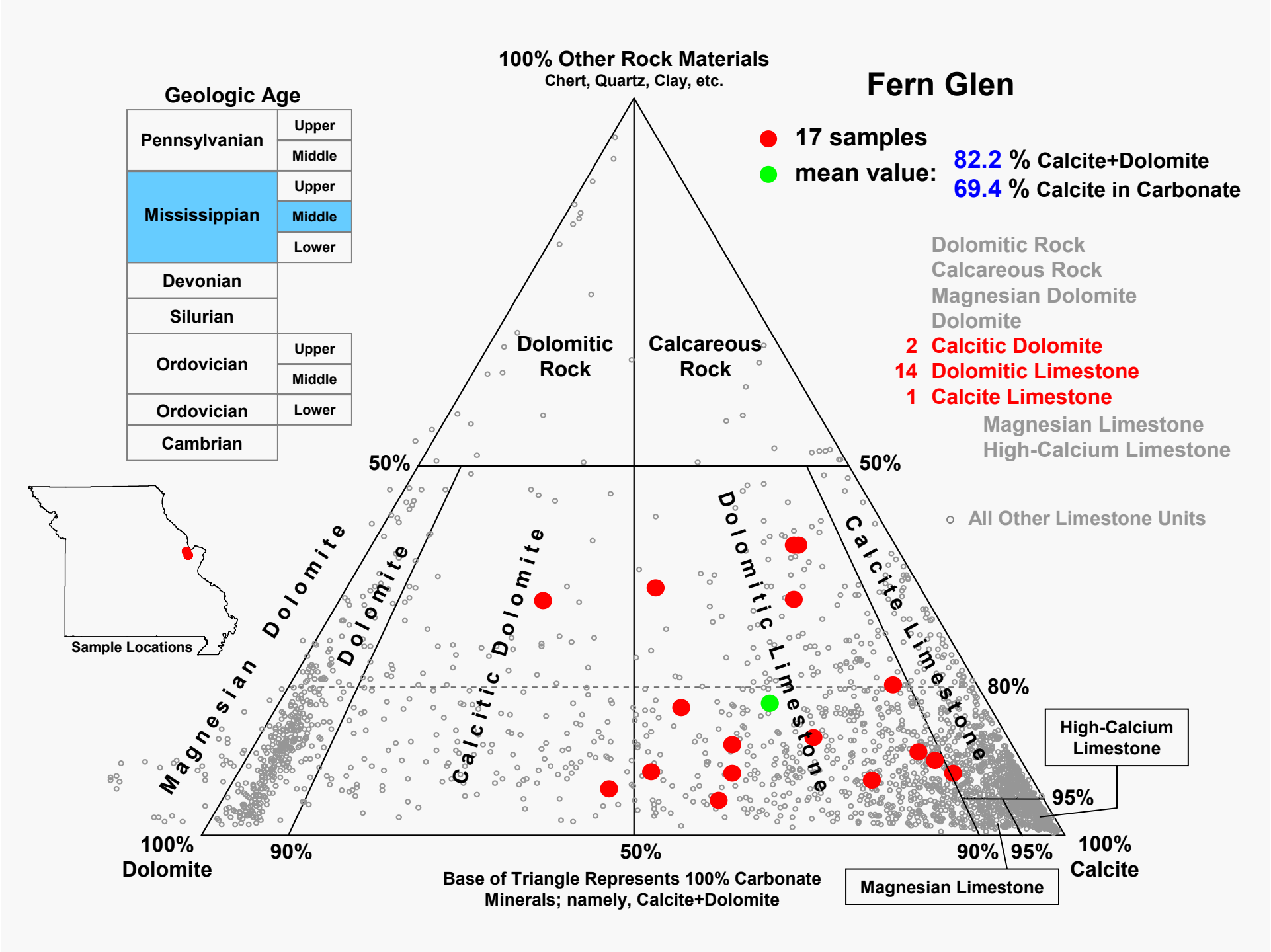

Salem
125 samples
mean value:
92.3 % Calcite+Dolomite
74.9 % Calcite in Carbonate
Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian
100% Other Rock Materials
Chert, Quartz, Clay, etc.
Dolomitic Rock
Calcareous Rock
Dolomitic Rock
Calcareous Rock
1 Magnesian Dolomite
3 Dolomite
19 Calcitic Dolomite
48 Dolomitic Limestone
54 Calcite Limestone
12 Magnesian Limestone
39 High-Calcium Limestone
All Other Limestone Units
50%
50%
80%
95%
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
High-Calcium Limestone
Magnesian Limestone
Sample Locations
100% Dolomite
90%
50%
90%
95%
100% Calcite
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite

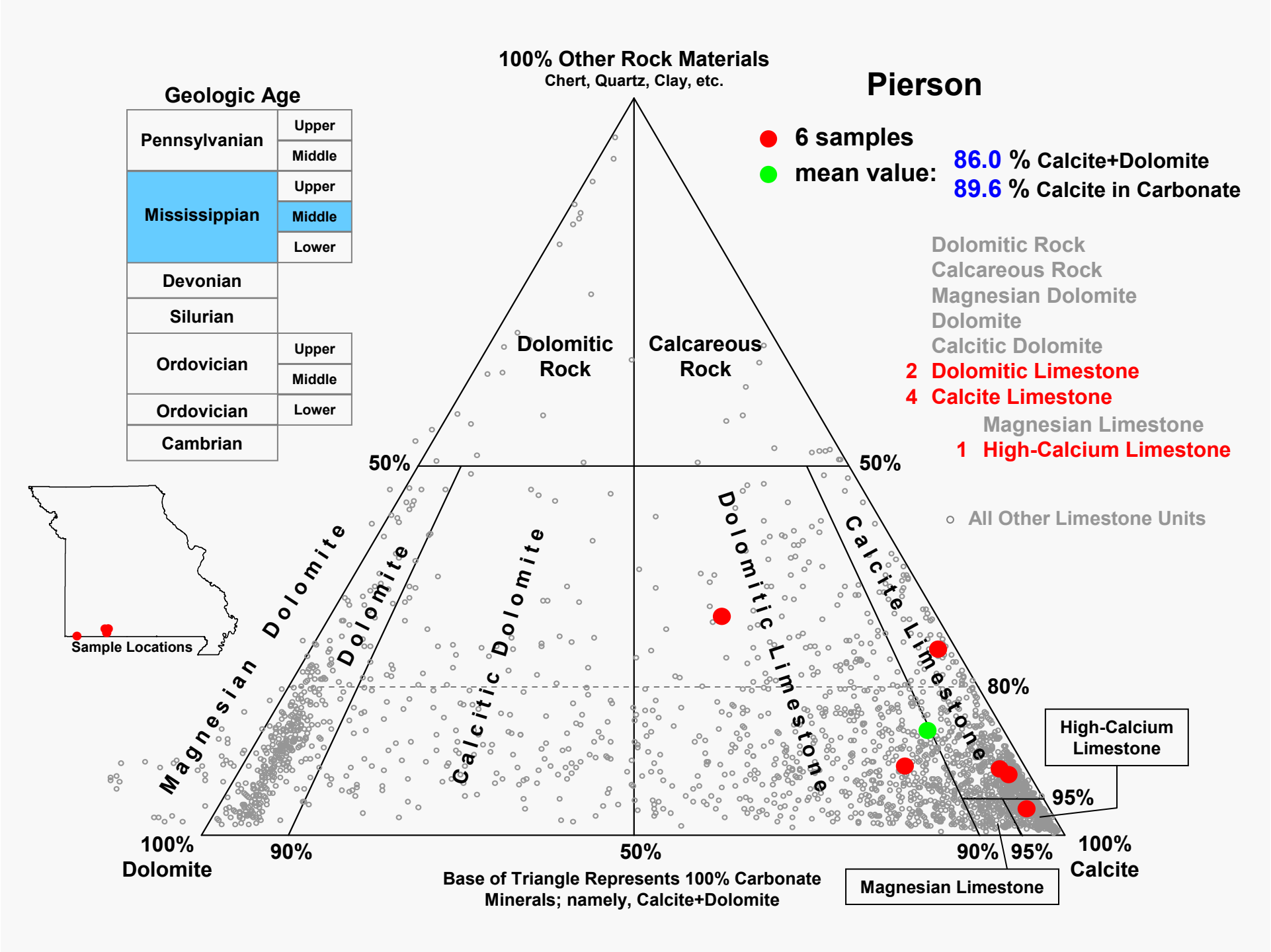

Warsaw–Salem
6 samples
mean value:
82.2 % Calcite+Dolomite
89.8 % Calcite in Carbonate
Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian
100% Other Rock Materials
Chert, Quartz, Clay, etc.
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
50%
50%
80%
95%
100% Dolomite
90%
50%
90%
95%
100% Calcite
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite
High-Calcium Limestone
Magnesian Limestone
Sample Locations
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
2 Dolomitic Limestone
4 Calcite Limestone
Magnesian Limestone
1 High-Calcium Limestone
All Other Limestone Units

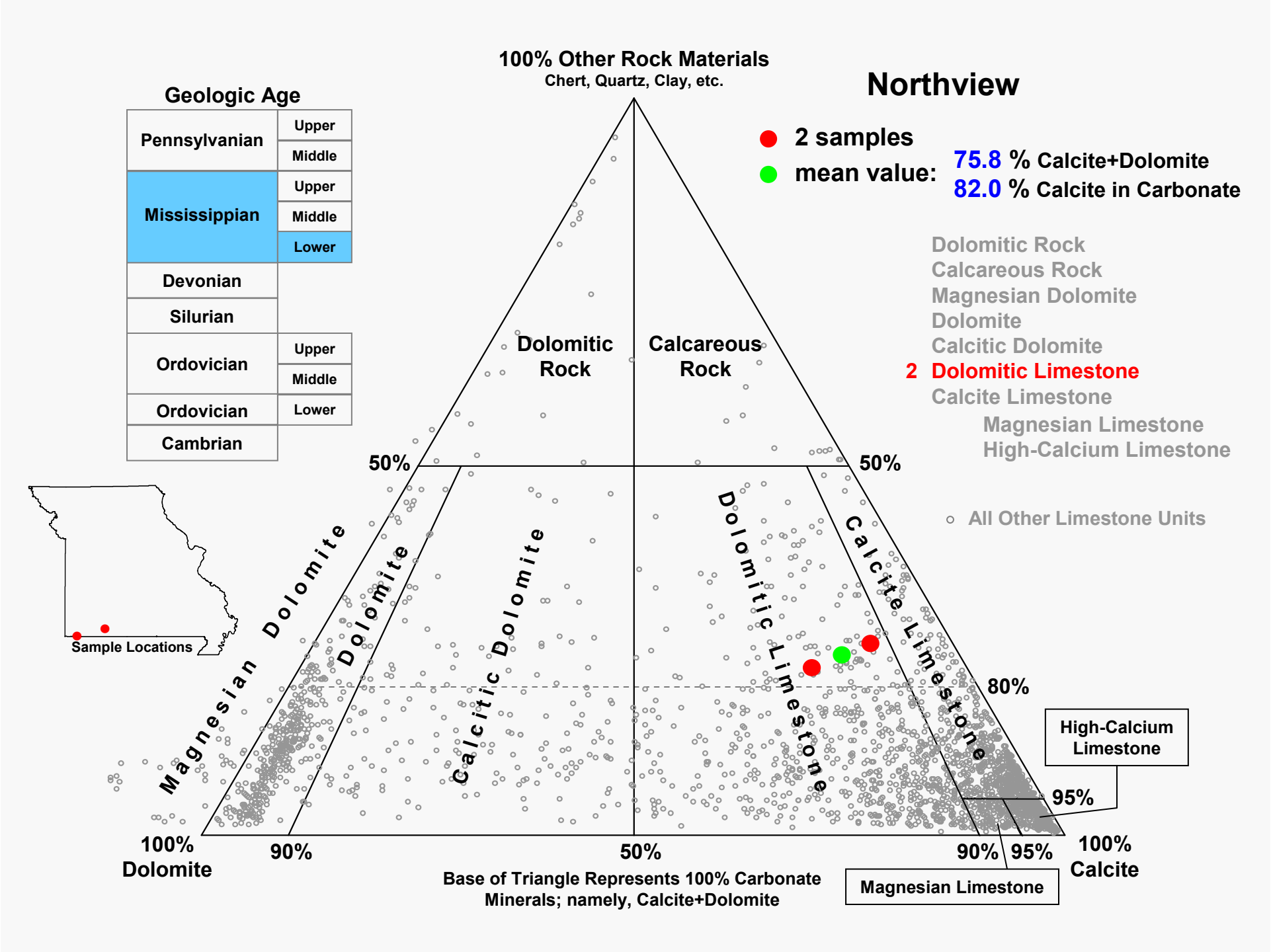

Warsaw
95 samples
mean value:
93.1 % Calcite+Dolomite
89.9 % Calcite in Carbonate
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
2 Dolomite
5 Calcitic Dolomite
10 Dolomitic Limestone
78 Calcite Limestone
3 Magnesian Limestone
57 High-Calcium Limestone
All Other Limestone Units
100% Other Rock Materials
Chert, Quartz, Clay, etc.
Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
50%
50%
80%
95%
100% Dolomite
90%
50%
90%
95%
100% Calcite
High-Calcium Limestone
Magnesian Limestone
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite
Sample Locations

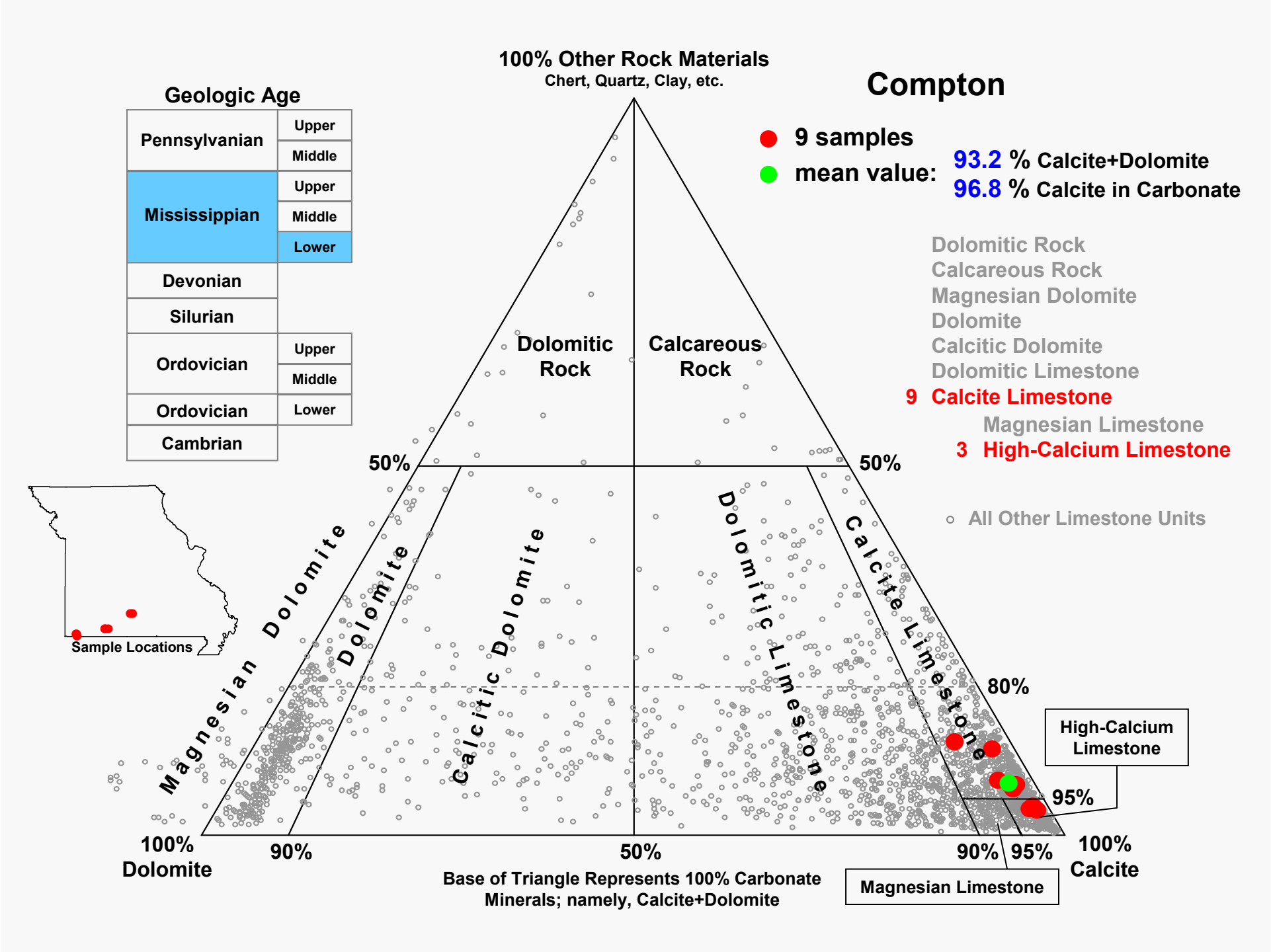

Burlington–Keokuk
405 samples
mean value:
89.6 % Calcite+Dolomite
87.6 % Calcite in Carbonate
4 Dolomitic Rock
2 Calcareous Rock
Magnesian Dolomite
3 Dolomite
24 Calcitic Dolomite
86 Dolomitic Limestone
286 Calcite Limestone
16 Magnesian Limestone
120 High-Calcium Limestone
All Other Limestone Units
100% Other Rock Materials
Chert, Quartz, Clay, etc.
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
50%
50%
80%
95%
100% Dolomite
90%
50%
90%
95%
100% Calcite
High-Calcium Limestone
Magnesian Limestone
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite
Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian
Sample Locations

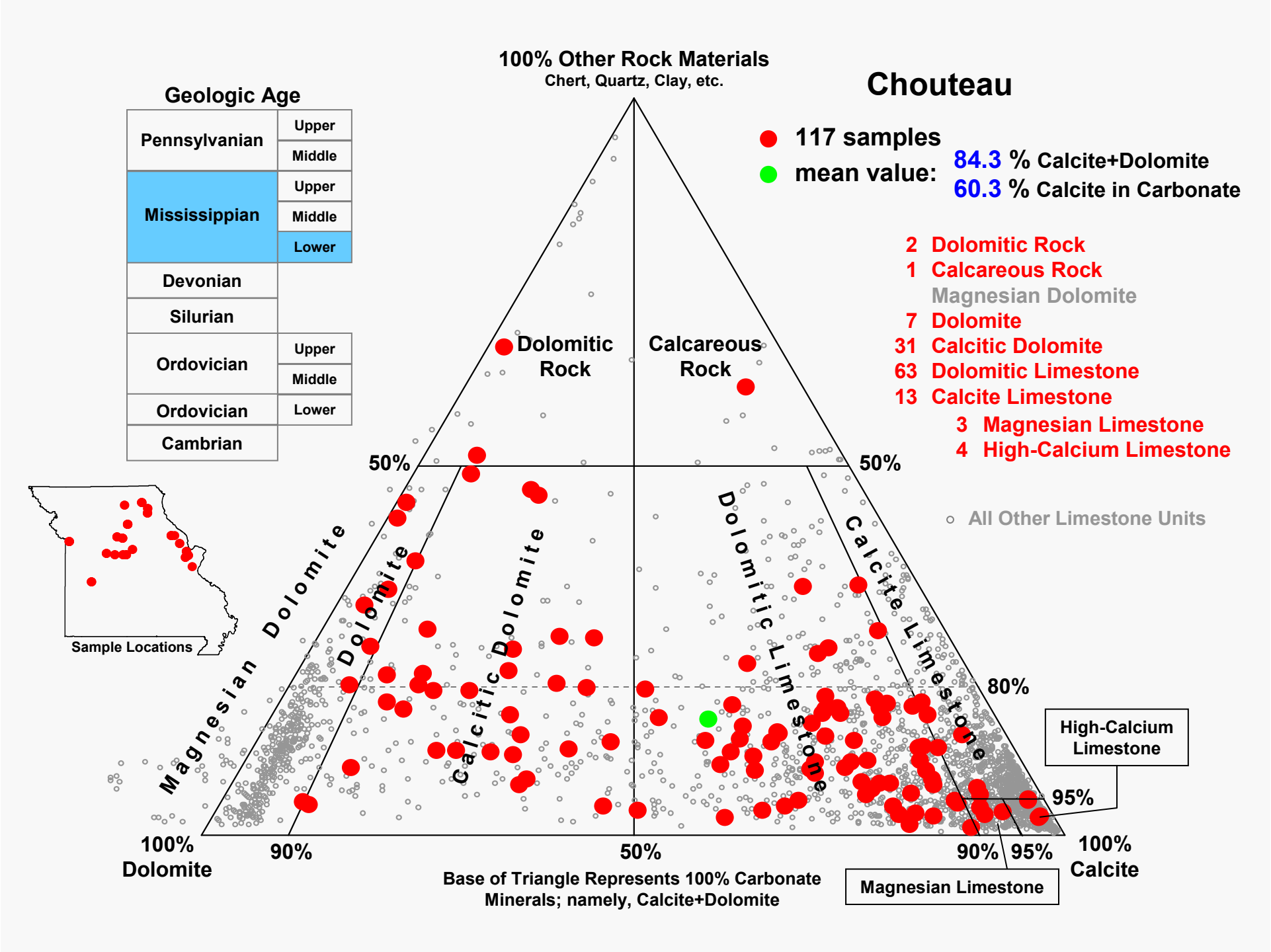

Reeds Spring–Elsey
9 samples
mean value:
53.0 % Calcite+Dolomite
94.7 % Calcite in Carbonate
Dolomitic Rock
4 Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
5 Calcite Limestone
Magnesian Limestone
High-Calcium Limestone
All Other Limestone Units
NOTE:
These units are characteristically very cherty.
100% Other Rock Materials
Chert, Quartz, Clay, etc.
Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian
Sample Locations
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
50%
50%
80%
95%
High-Calcium Limestone
Magnesian Limestone
100% Dolomite
90%
50%
90%
95%
100% Calcite
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite

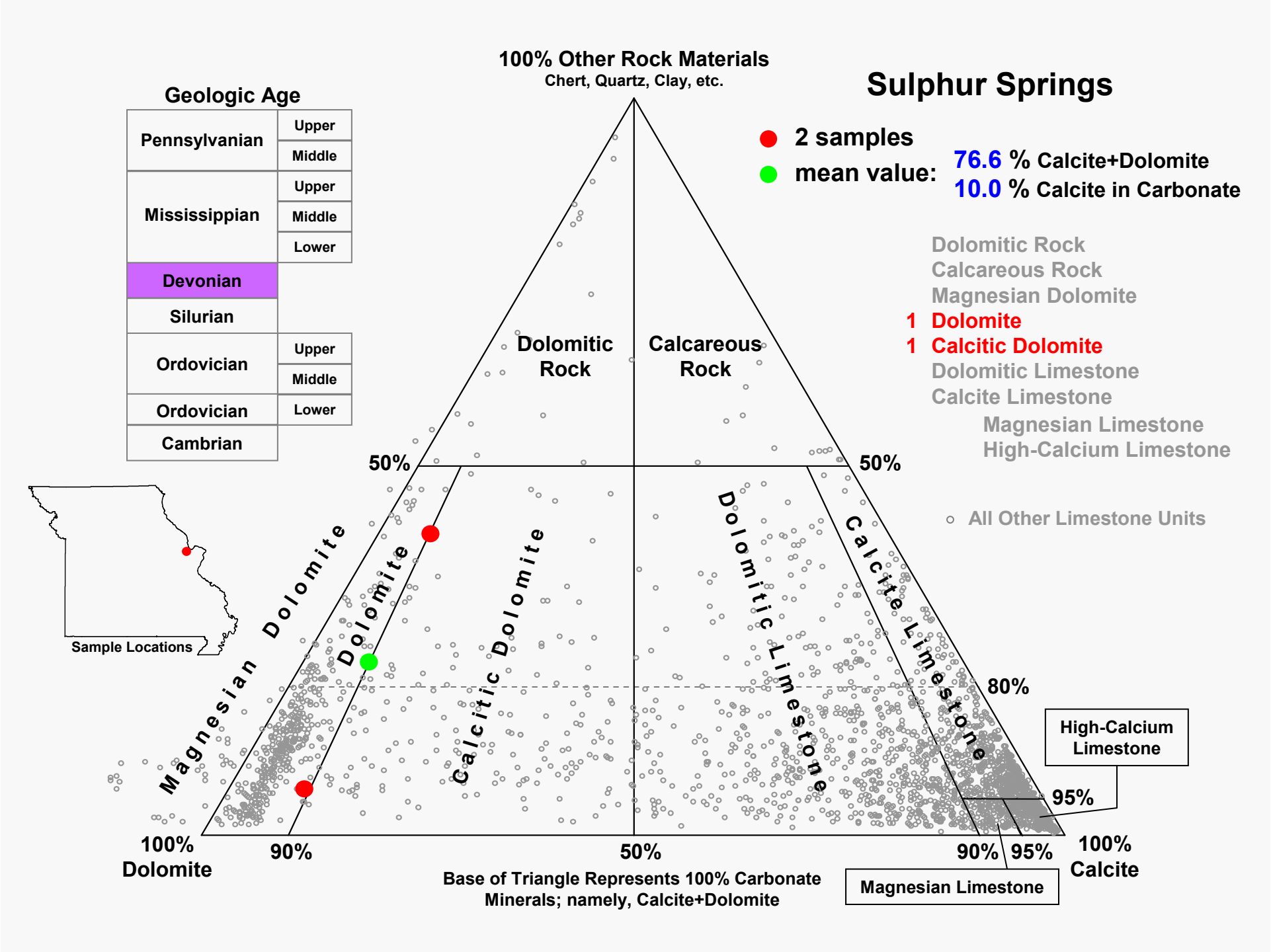

Fern Glen
17 samples
mean value:
82.2 % Calcite+Dolomite
69.4 % Calcite in Carbonate
Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian
100% Other Rock Materials
Chert, Quartz, Clay, etc.
Dolomitic Rock
Calcareous Rock
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
2 Calcitic Dolomite
14 Dolomitic Limestone
1 Calcite Limestone
Magnesian Limestone
High-Calcium Limestone
All Other Limestone Units
50%
50%
80%
95%
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
High-Calcium Limestone
Magnesian Limestone
Sample Locations
100% Dolomite
90%
50%
90%
95%
100% Calcite
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite

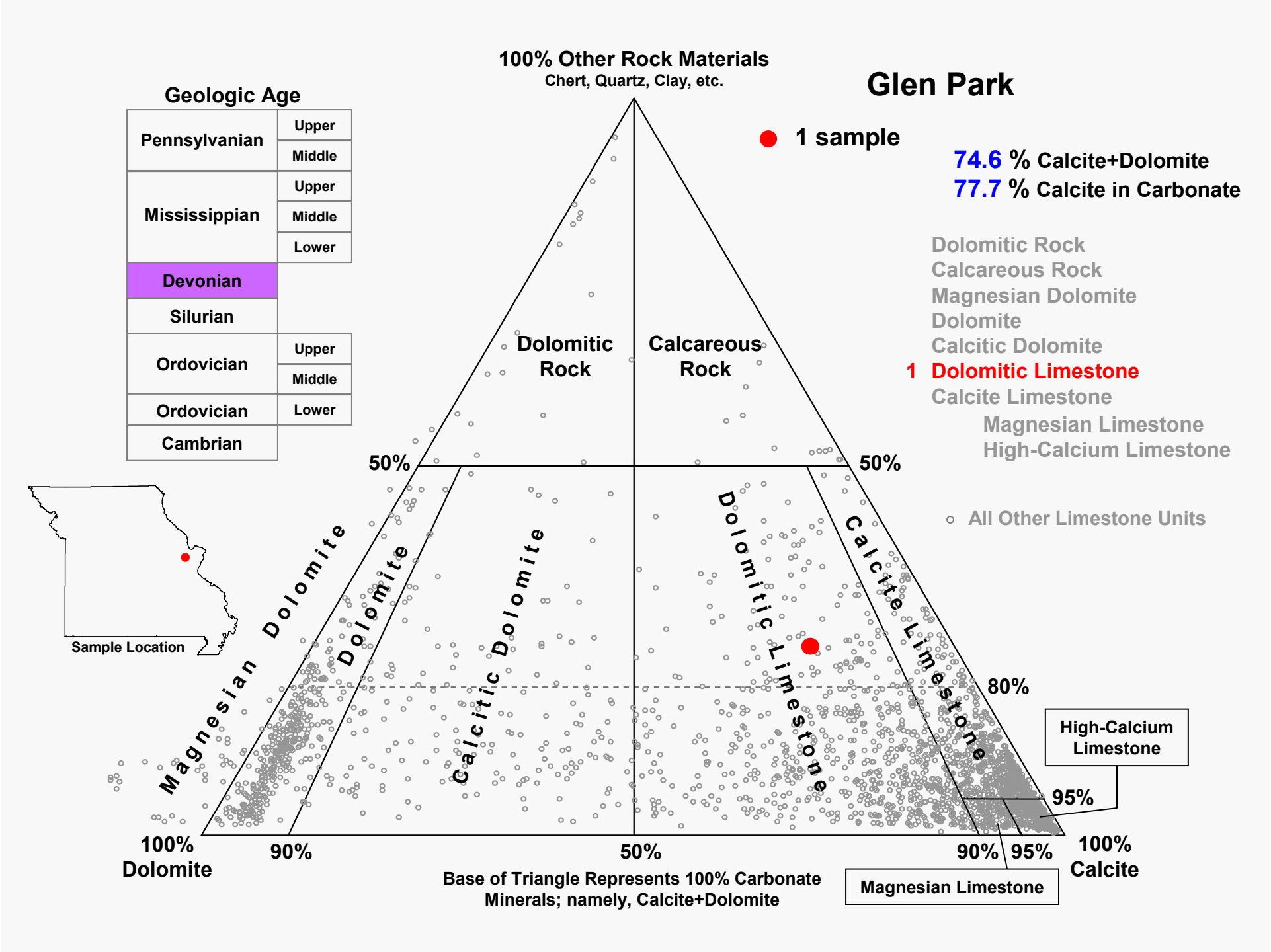

Pierson
6 samples
mean value:
86.0 % Calcite+Dolomite
89.6 % Calcite in Carbonate
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
2 Dolomitic Limestone
4 Calcite Limestone
Magnesian Limestone
1 High-Calcium Limestone
All Other Limestone Units
100% Other Rock Materials
Chert, Quartz, Clay, etc.
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
50%
50%
80%
95%
100% Dolomite
90%
50%
90%
95%
100% Calcite
High-Calcium Limestone
Magnesian Limestone
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite
Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian
Sample Locations

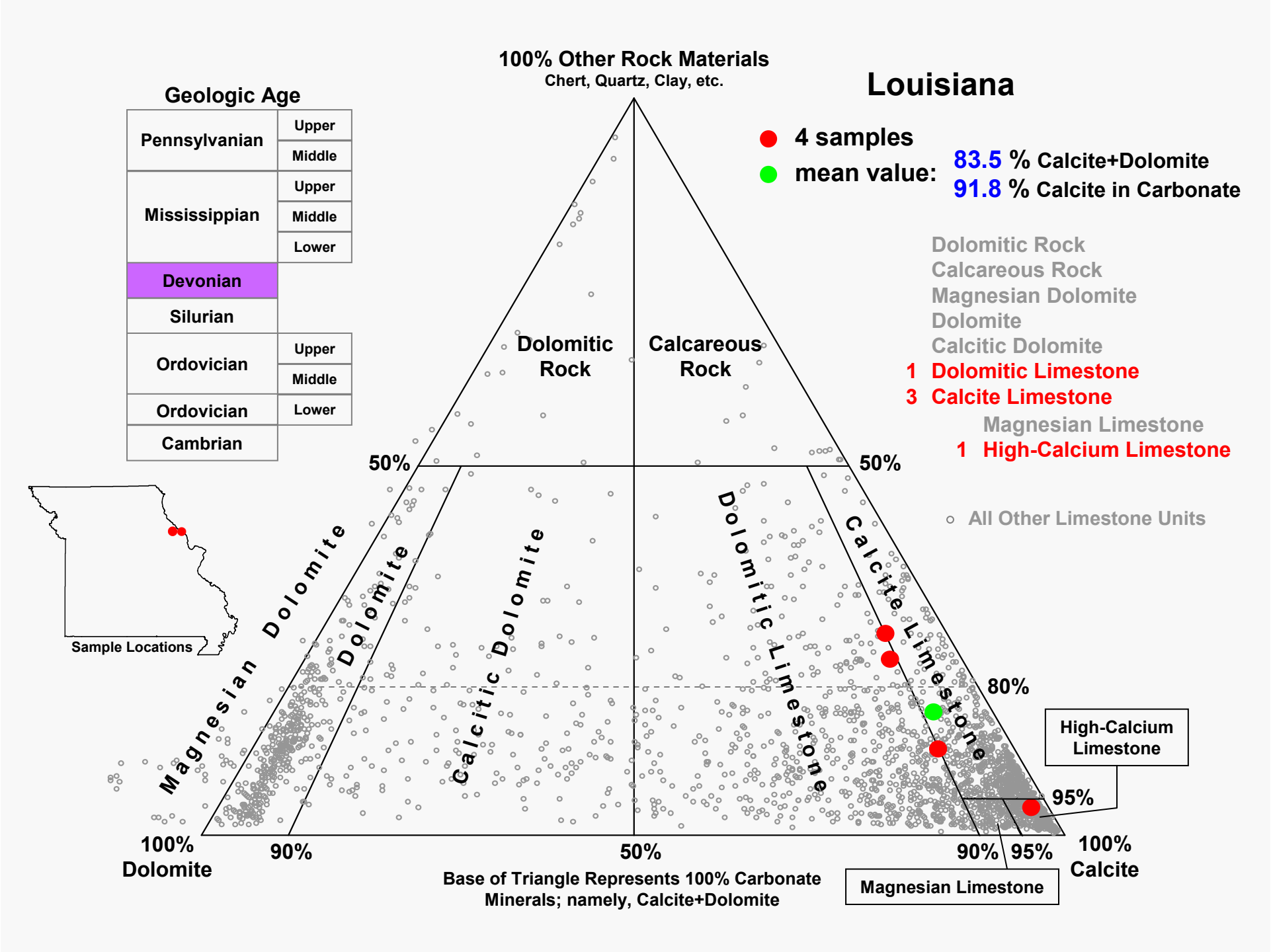

Northview
2 samples
mean value:
75.8 % Calcite+Dolomite
82.0 % Calcite in Carbonate
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
2 Dolomitic Limestone
Calcite Limestone
Magnesian Limestone
High-Calcium Limestone
All Other Limestone Units
100% Other Rock Materials
Chert, Quartz, Clay, etc.
Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
50%
50%
80%
95%
100% Dolomite
90%
50%
90%
95%
100% Calcite
High-Calcium Limestone
Magnesian Limestone
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite
Sample Locations

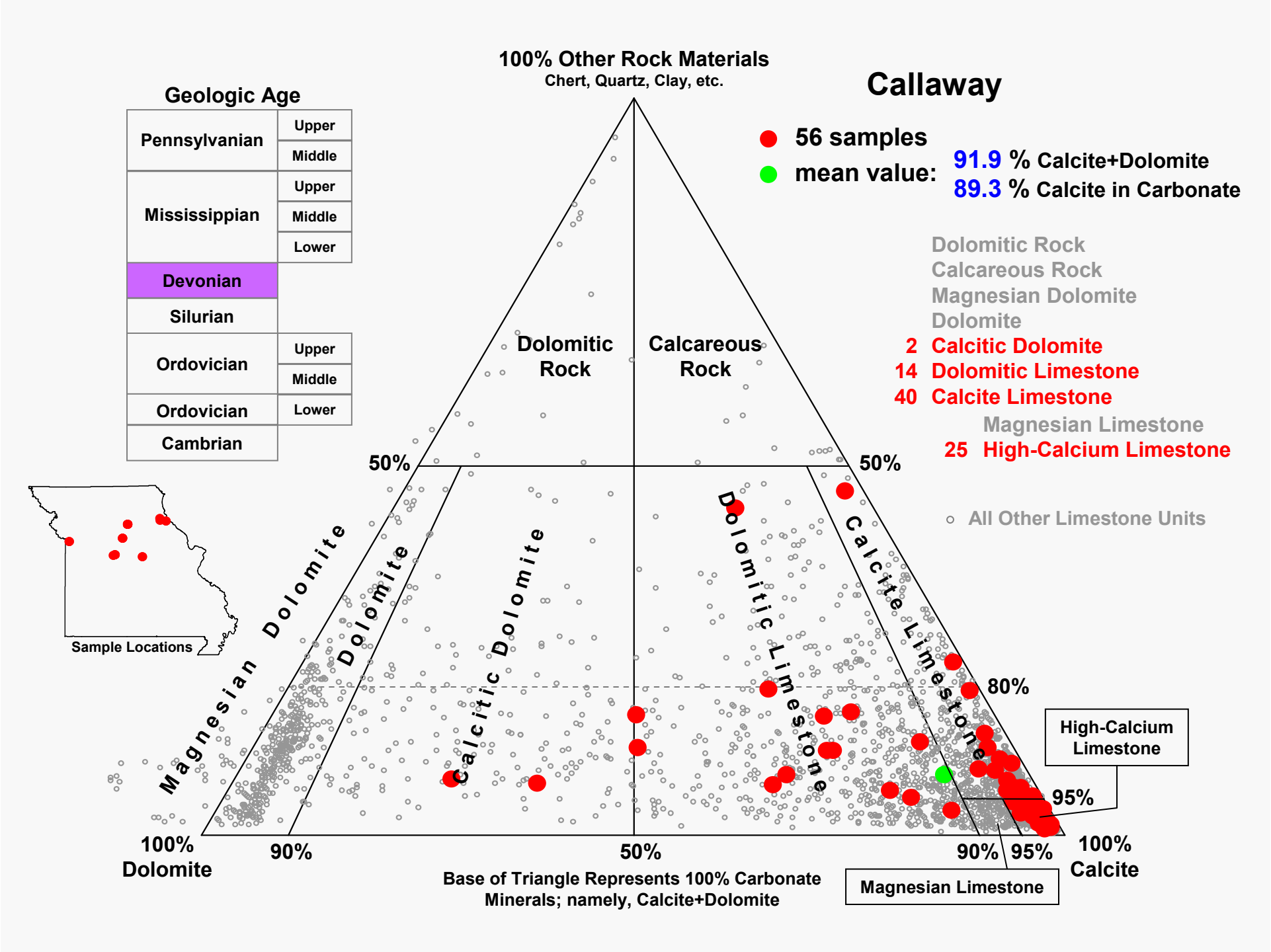

Compton
9 samples
mean value:
93.2 % Calcite+Dolomite
96.8 % Calcite in Carbonate
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
9 Calcite Limestone
Magnesian Limestone
3 High-Calcium Limestone
All Other Limestone Units
100% Other Rock Materials
Chert, Quartz, Clay, etc.
Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian
Sample Locations
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
50%
50%
80%
95%
High-Calcium Limestone
Magnesian Limestone
100% Dolomite
90%
50%
90%
95%
100% Calcite
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite

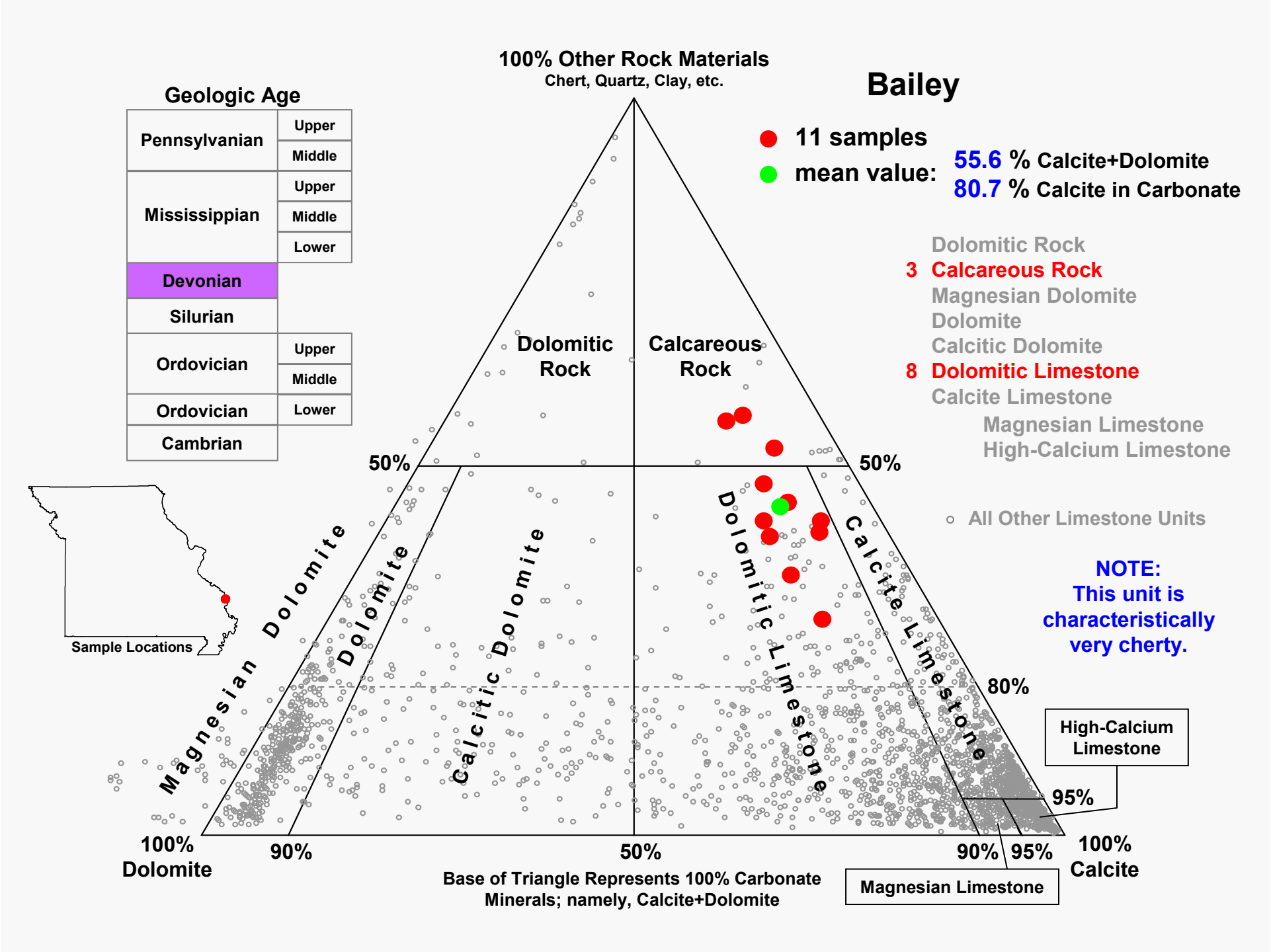

Chouteau
117 samples
mean value:
84.3 % Calcite+Dolomite
60.3 % Calcite in Carbonate
2 Dolomitic Rock
1 Calcareous Rock
Magnesian Dolomite
7 Dolomite
31 Calcitic Dolomite
63 Dolomitic Limestone
13 Calcite Limestone
3 Magnesian Limestone
4 High-Calcium Limestone
All Other Limestone Units
100% Other Rock Materials
Chert, Quartz, Clay, etc.
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
50%
50%
80%
95%
100% Dolomite
90%
50%
90%
95%
100% Calcite
High-Calcium Limestone
Magnesian Limestone
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite
Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian
Sample Locations

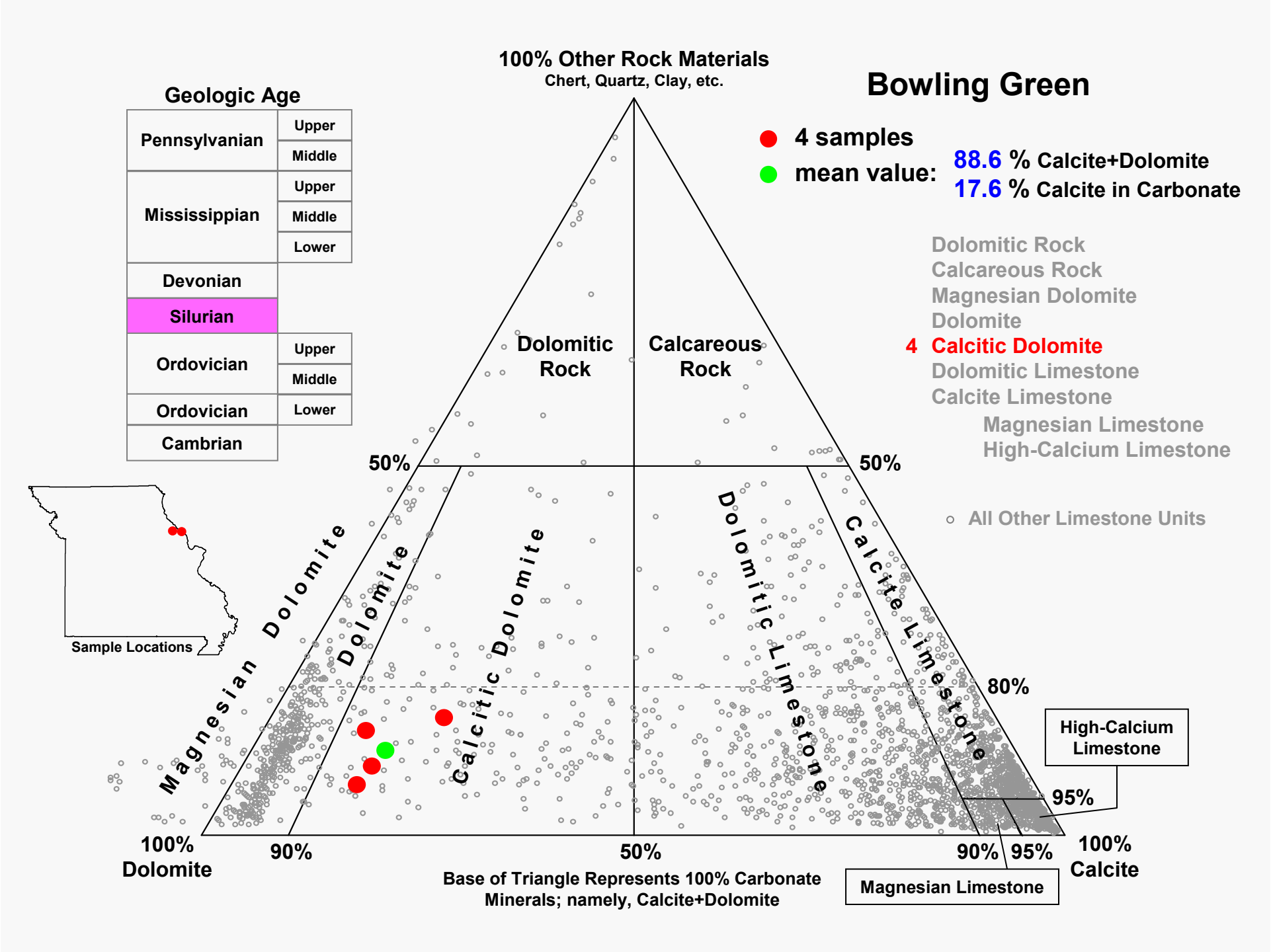

Sulphur Springs
2 samples
mean value:
76.6 % Calcite+Dolomite
10.0 % Calcite in Carbonate
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
1 Dolomite
1 Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
Magnesian Limestone
High-Calcium Limestone
All Other Limestone Units
100% Other Rock Materials
Chert, Quartz, Clay, etc.
Dolomitic Rock
Calcareous Rock
50%
50%
80%
95%
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
High-Calcium Limestone
Magnesian Limestone
100% Dolomite
90%
50%
90%
95%
100% Calcite
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite
Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian
Sample Locations

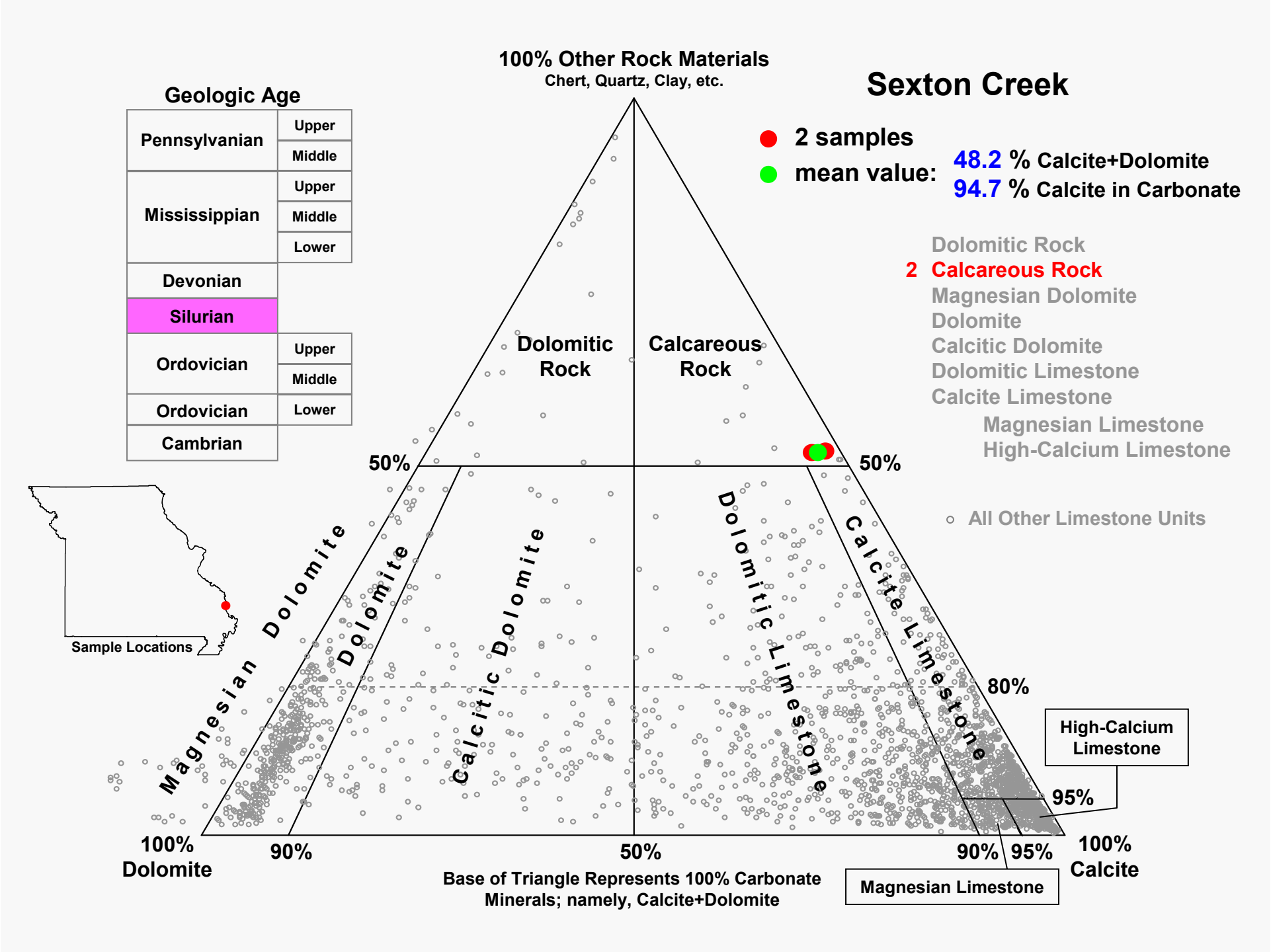

Glen Park
1 sample
74.6 % Calcite+Dolomite
77.7 % Calcite in Carbonate
Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian
100% Other Rock Materials
Chert, Quartz, Clay, etc.
Dolomitic Rock
Calcareous Rock
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
1 Dolomitic Limestone
Calcite Limestone
Magnesian Limestone
High-Calcium Limestone
All Other Limestone Units
Sample Location
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
50%
50%
80%
95%
High-Calcium Limestone
Magnesian Limestone
100% Dolomite
90%
50%
90%
95%
100% Calcite
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite


Louisiana
4 samples
mean value:
83.5 % Calcite+Dolomite
91.8 % Calcite in Carbonate
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
1 Dolomitic Limestone
3 Calcite Limestone
Magnesian Limestone
1 High-Calcium Limestone
All Other Limestone Units
100% Other Rock Materials
Chert, Quartz, Clay, etc.
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
50%
50%
80%
95%
100% Dolomite
90%
50%
90%
95%
100% Calcite
High-Calcium Limestone
Magnesian Limestone
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite
Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian
Sample Locations


Callaway
56 samples
mean value:
91.9 % Calcite+Dolomite
89.3 % Calcite in Carbonate
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
2 Calcitic Dolomite
14 Dolomitic Limestone
40 Calcite Limestone
Magnesian Limestone
25 High-Calcium Limestone
All Other Limestone Units
100% Other Rock Materials
Chert, Quartz, Clay, etc.
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
50%
50%
80%
95%
100% Dolomite
90%
50%
90%
95%
100% Calcite
High-Calcium Limestone
Magnesian Limestone
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite
Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian
Sample Locations


Bailey
11 samples
mean value:
55.6 % Calcite+Dolomite
80.7 % Calcite in Carbonate
Dolomitic Rock
3 Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
8 Dolomitic Limestone
Calcite Limestone
Magnesian Limestone
High-Calcium Limestone
All Other Limestone Units
NOTE:
This unit is characteristically very cherty.
100% Other Rock Materials
Chert, Quartz, Clay, etc.
Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
50%
50%
80%
95%
100% Dolomite
90%
50%
90%
95%
100% Calcite
High-Calcium Limestone
Magnesian Limestone
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite
Sample Locations


Bowling Green
4 samples
mean value:
88.6 % Calcite+Dolomite
17.6 % Calcite in Carbonate
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
4 Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
Magnesian Limestone
High-Calcium Limestone
All Other Limestone Units
100% Other Rock Materials
Chert, Quartz, Clay, etc.
Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
50%
50%
80%
95%
100% Dolomite
90%
50%
90%
95%
100% Calcite
High-Calcium Limestone
Magnesian Limestone
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite
Sample Locations


Sexton Creek
2 samples
mean value:
48.2 % Calcite+Dolomite
94.7 % Calcite in Carbonate
Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian
100% Other Rock Materials
Chert, Quartz, Clay, etc.
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
50%
50%
80%
95%
100% Dolomite
90%
50%
90%
95%
100% Calcite
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite
High-Calcium Limestone
Magnesian Limestone
Sample Locations
Dolomitic Rock
2 Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
Magnesian Limestone
High-Calcium Limestone
All Other Limestone Units

Noix

● 1 sample

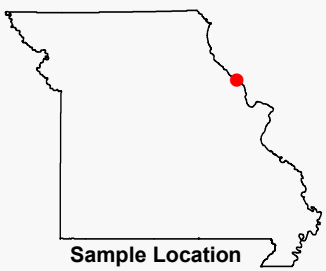
95.9 % Calcite+Dolomite
97.8 % Calcite in Carbonate

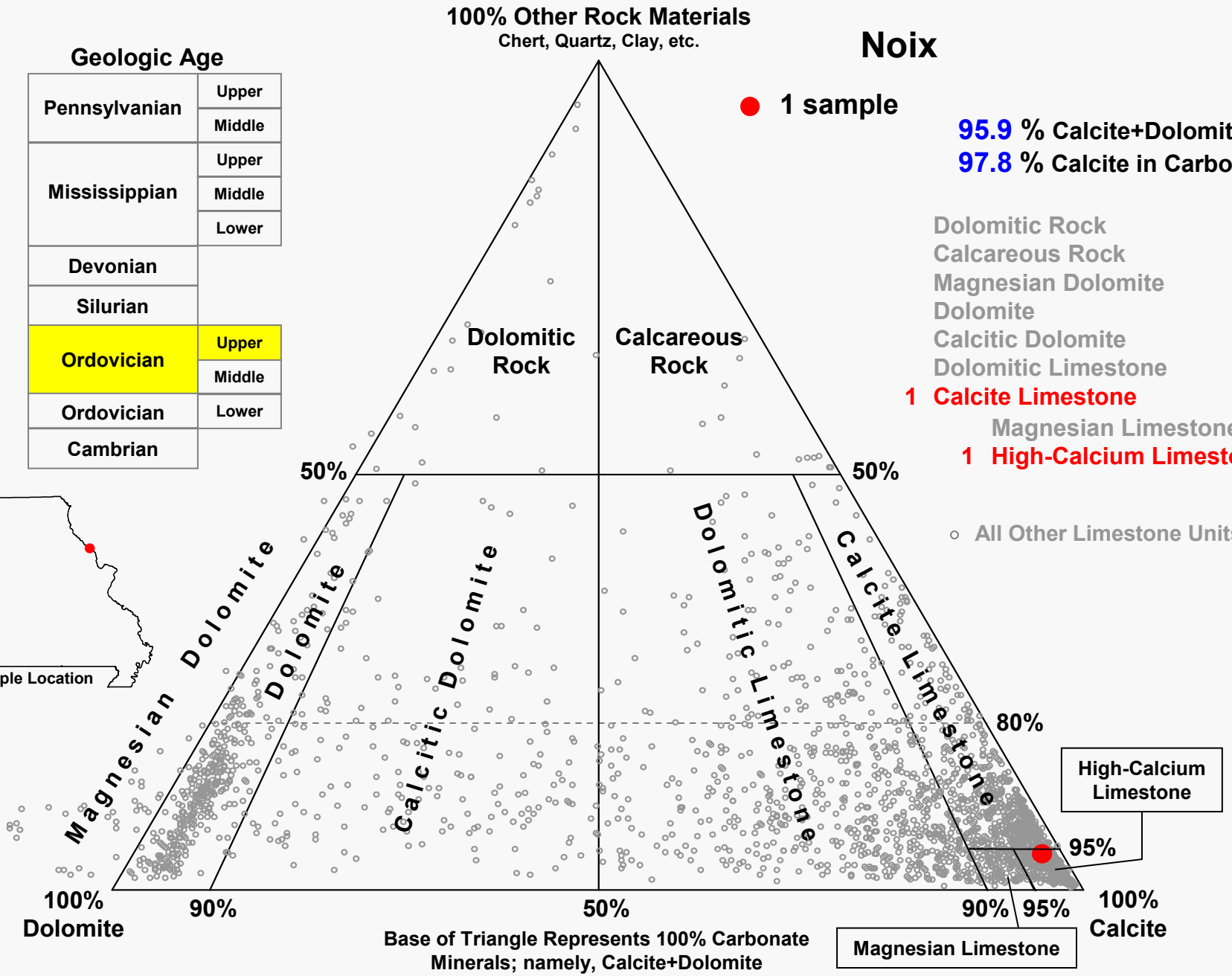
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
1 Calcite Limestone
Magnesian Limestone
1 High-Calcium Limestone

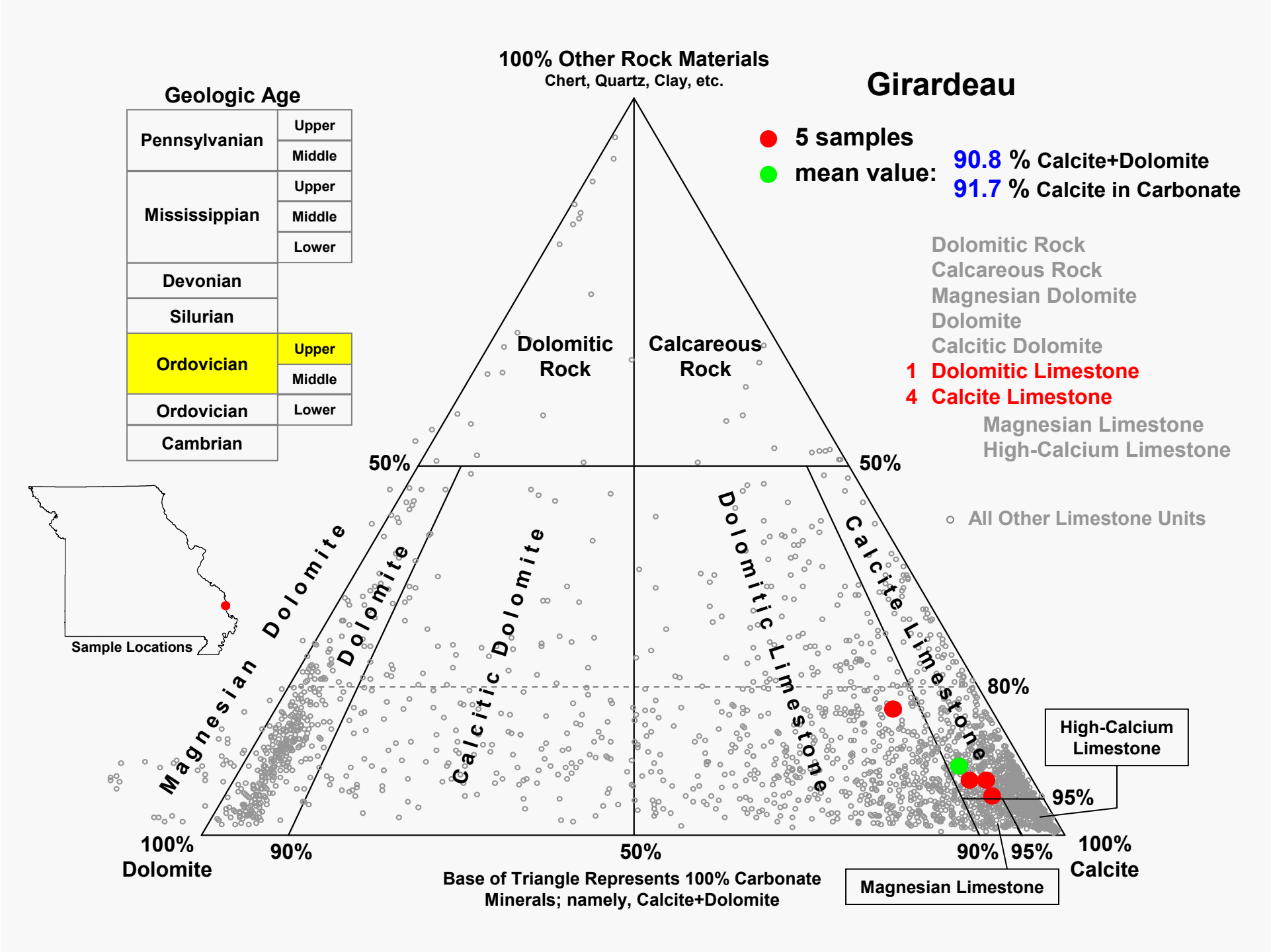
○ All Other Limestone Units

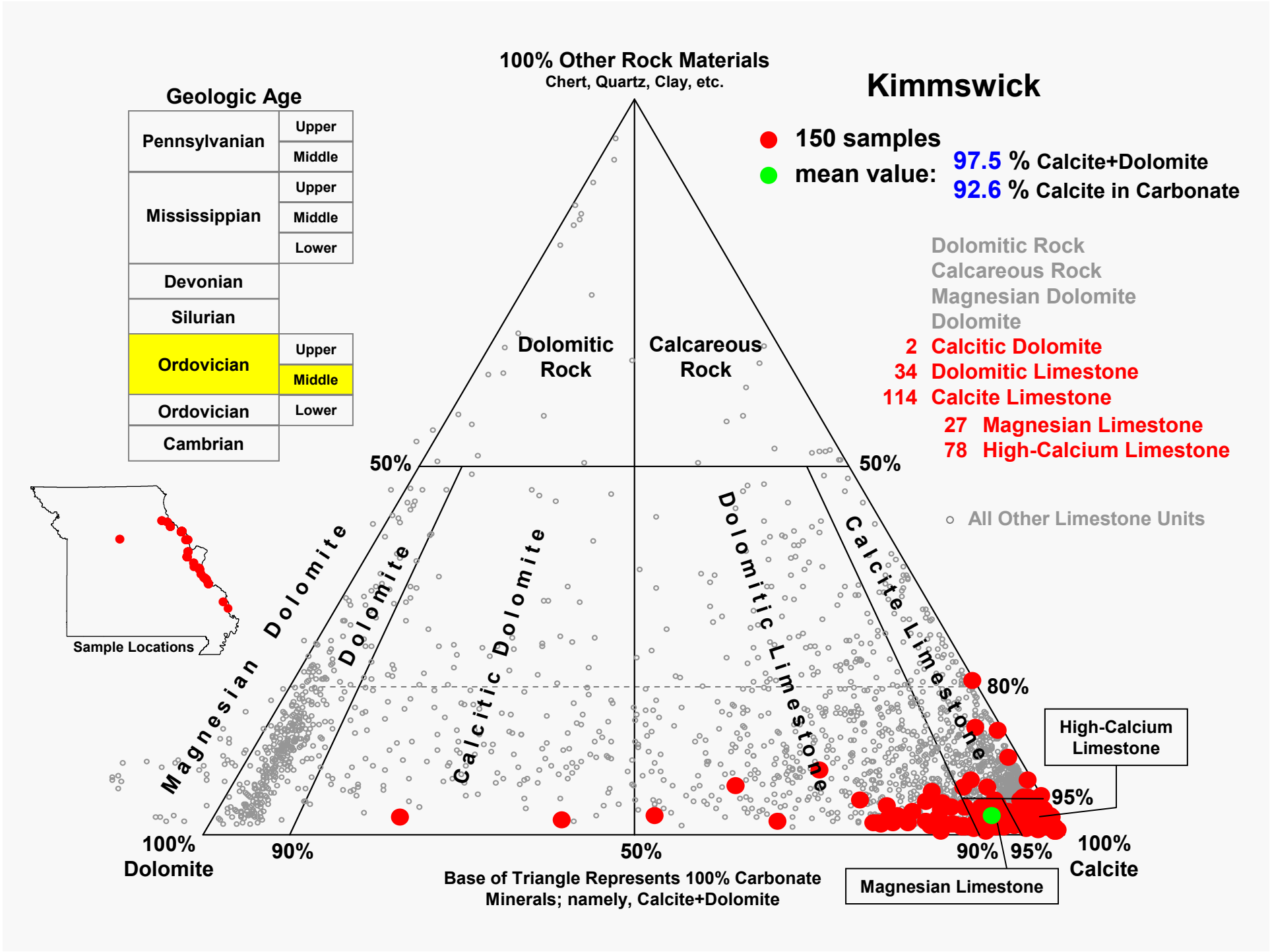
Geologic Age

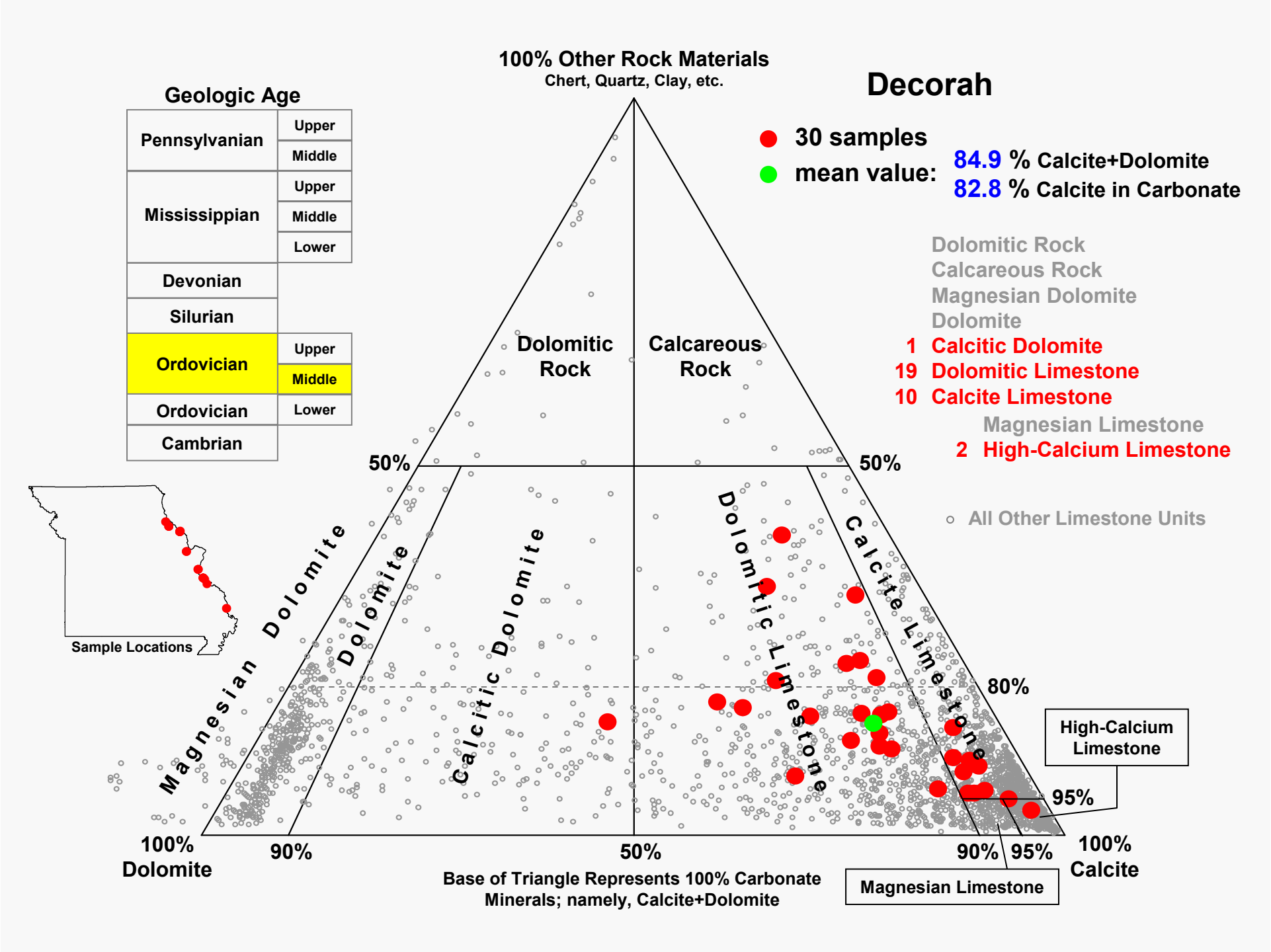
Pennsylvanian	Upper
	Middle
Mississippian	Upper
	Middle
	Lower
Devonian	
Silurian	
Ordovician	Upper
	Middle
Ordovician	Lower
Cambrian	

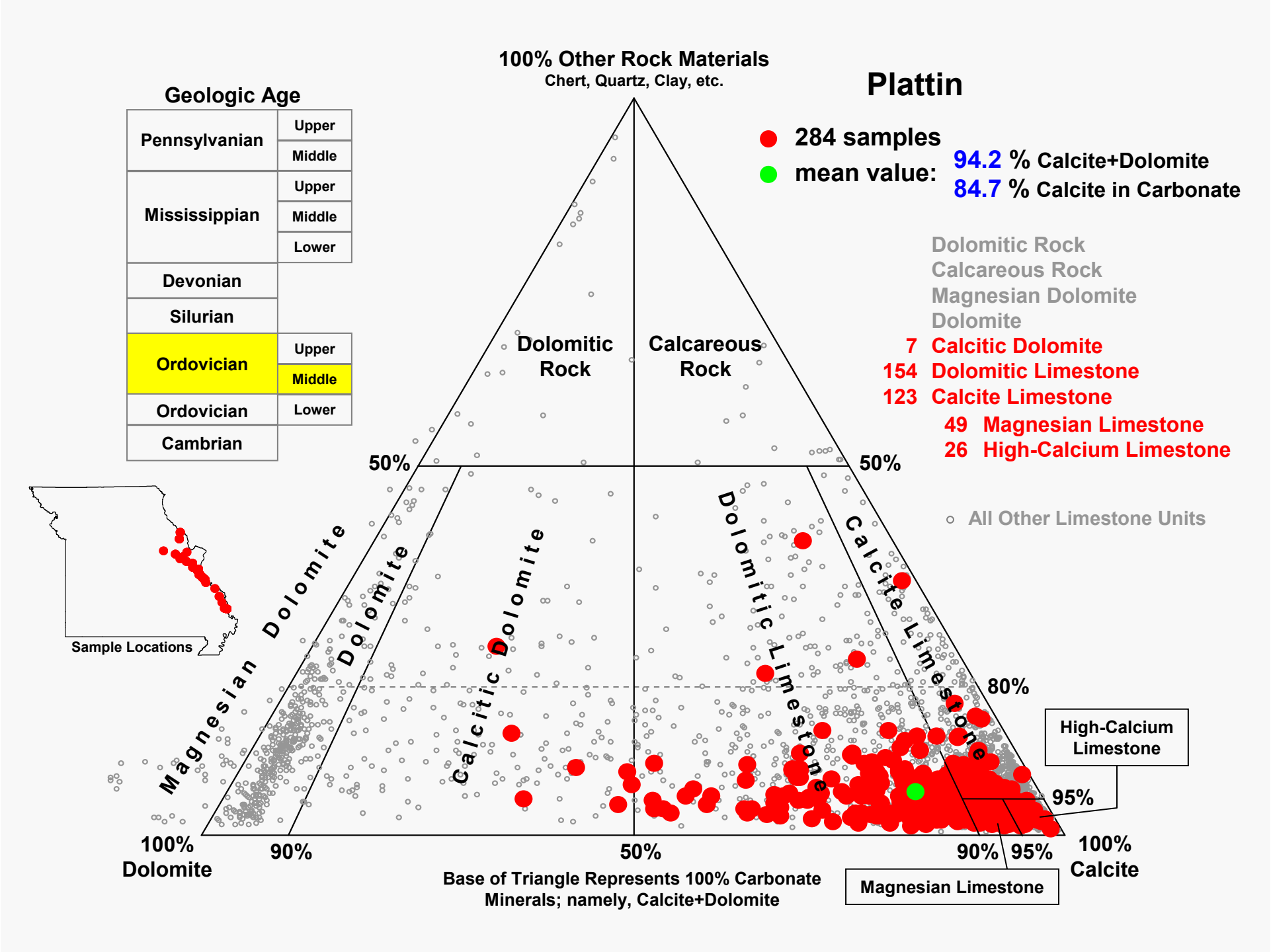


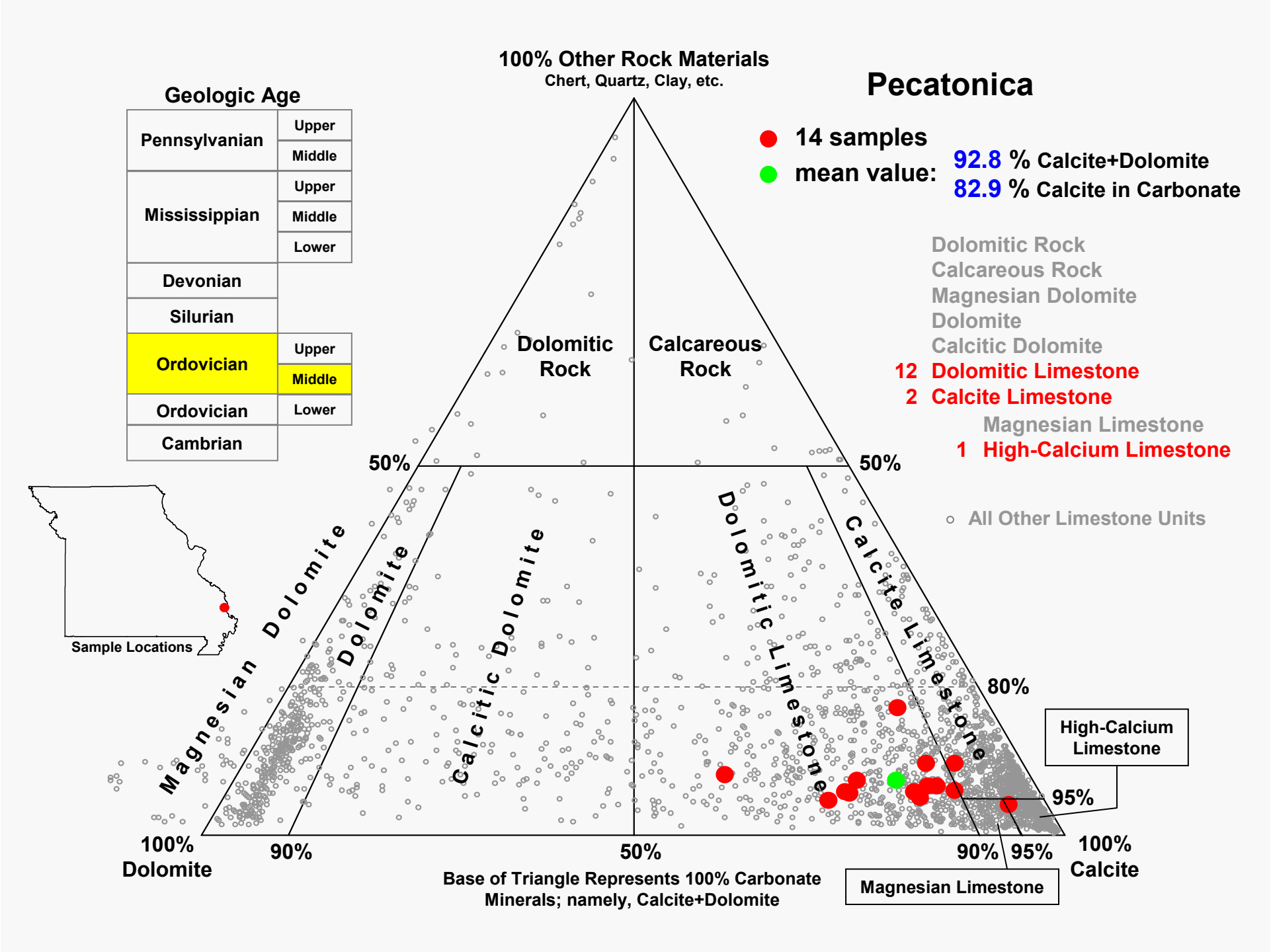



Girardeau
5 samples
mean value:
90.8 % Calcite+Dolomite
91.7 % Calcite in Carbonate
Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian
100% Other Rock Materials
Chert, Quartz, Clay, etc.
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
50%
50%
80%
95%
100% Dolomite
90%
50%
90%
95%
100% Calcite
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite
High-Calcium Limestone
Magnesian Limestone
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
1 Dolomitic Limestone
4 Calcite Limestone
Magnesian Limestone
High-Calcium Limestone
All Other Limestone Units
Sample Locations

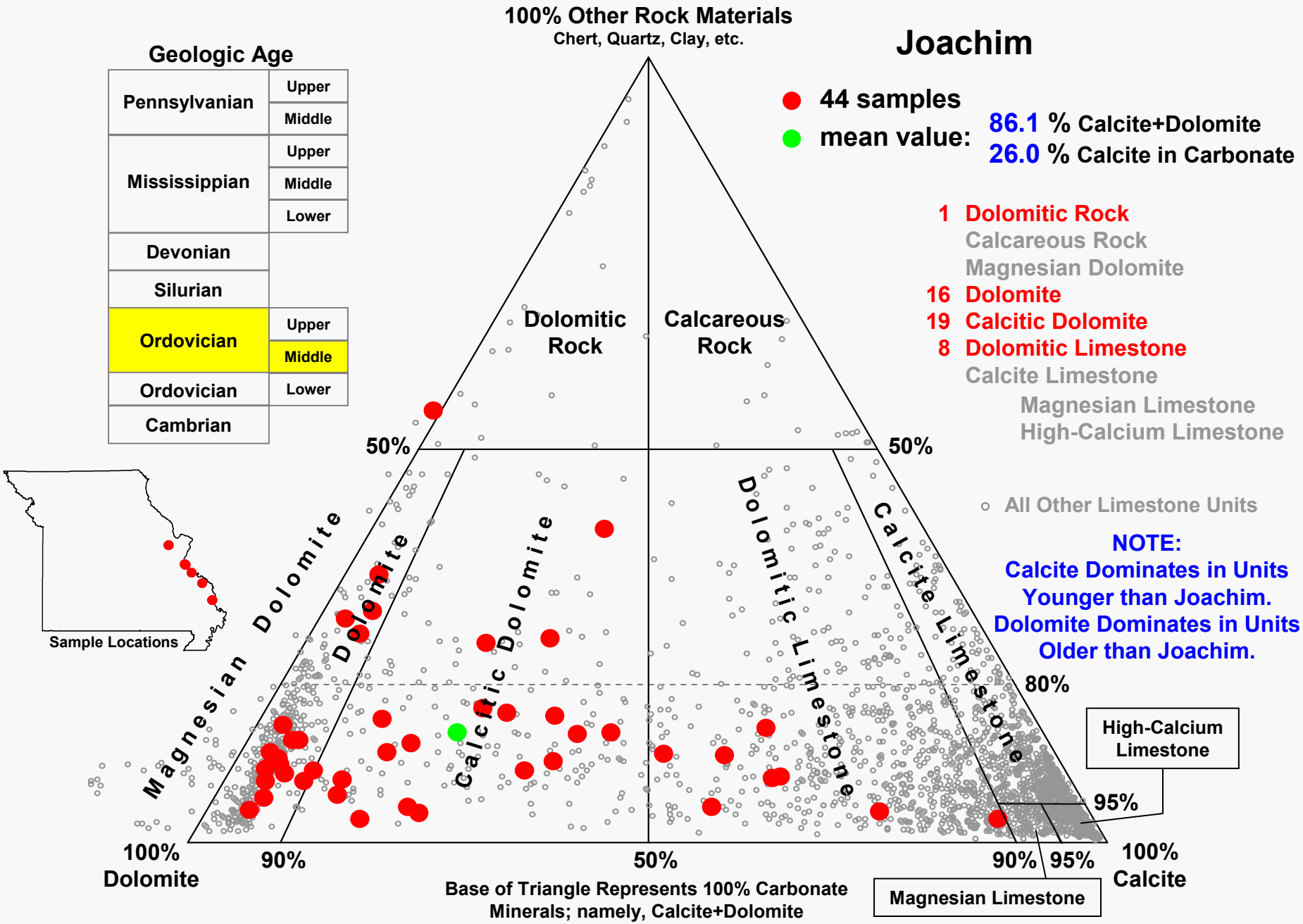

Kimmswick
150 samples
mean value:
97.5 % Calcite+Dolomite
92.6 % Calcite in Carbonate
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
2 Calcitic Dolomite
34 Dolomitic Limestone
114 Calcite Limestone
27 Magnesian Limestone
78 High-Calcium Limestone
All Other Limestone Units
100% Other Rock Materials
Chert, Quartz, Clay, etc.
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
50%
50%
80%
95%
High-Calcium Limestone
Magnesian Limestone
100% Dolomite
90%
50%
90%
95%
100% Calcite
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite
Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian
Sample Locations

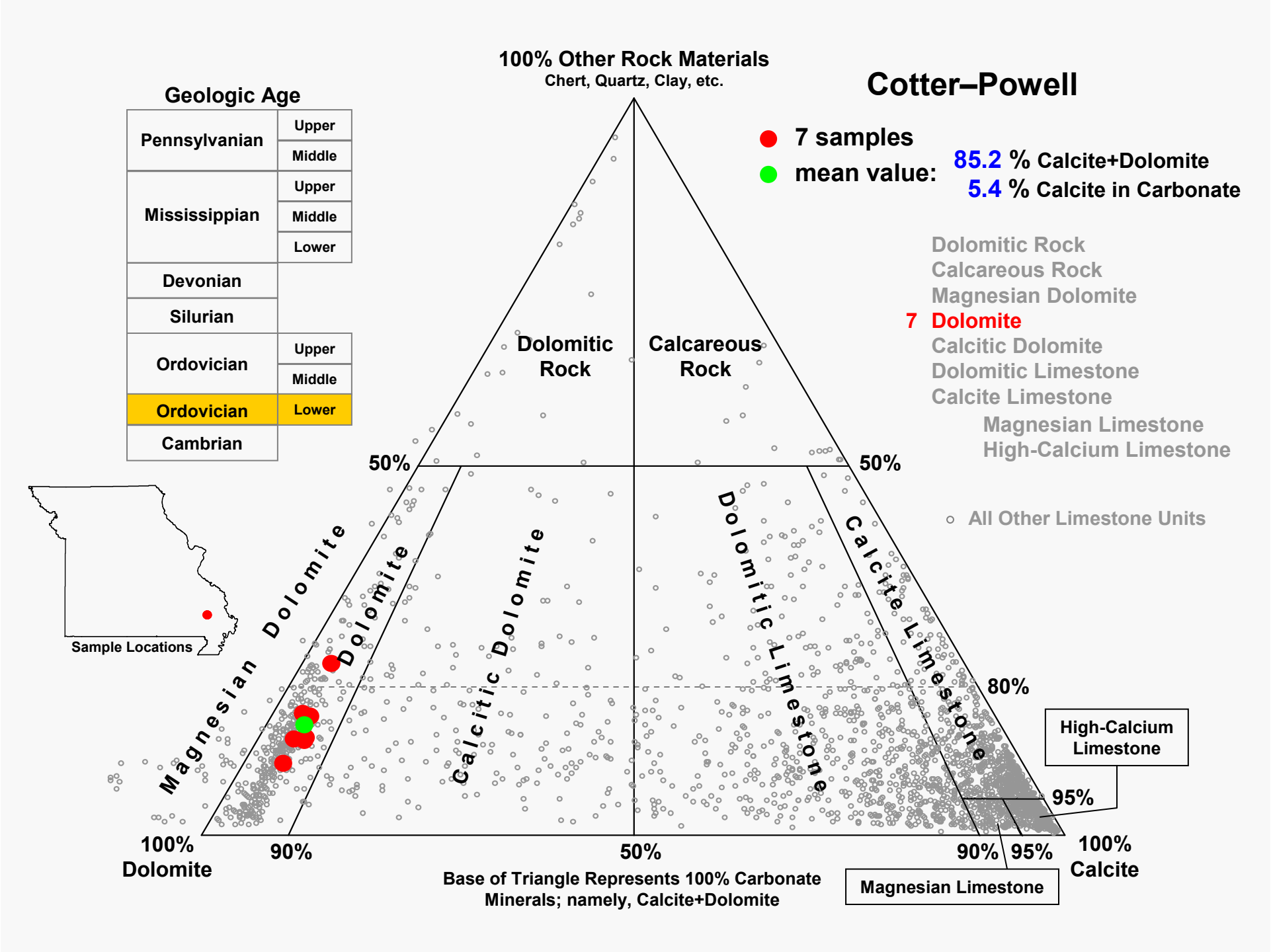

Decorah
30 samples
mean value:
84.9 % Calcite+Dolomite
82.8 % Calcite in Carbonate
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
1 Calcitic Dolomite
19 Dolomitic Limestone
10 Calcite Limestone
Magnesian Limestone
2 High-Calcium Limestone
All Other Limestone Units
100% Other Rock Materials
Chert, Quartz, Clay, etc.
Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian
Sample Locations
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
50%
50%
80%
95%
High-Calcium Limestone
Magnesian Limestone
100% Dolomite
90%
50%
90%
95%
100% Calcite
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite


Plattin
284 samples
mean value:
94.2 % Calcite+Dolomite
84.7 % Calcite in Carbonate
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
7 Calcitic Dolomite
154 Dolomitic Limestone
123 Calcite Limestone
49 Magnesian Limestone
26 High-Calcium Limestone
All Other Limestone Units
100% Other Rock Materials
Chert, Quartz, Clay, etc.
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
50%
50%
80%
95%
100% Dolomite
90%
50%
90%
95%
100% Calcite
High-Calcium Limestone
Magnesian Limestone
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite
Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian
Sample Locations

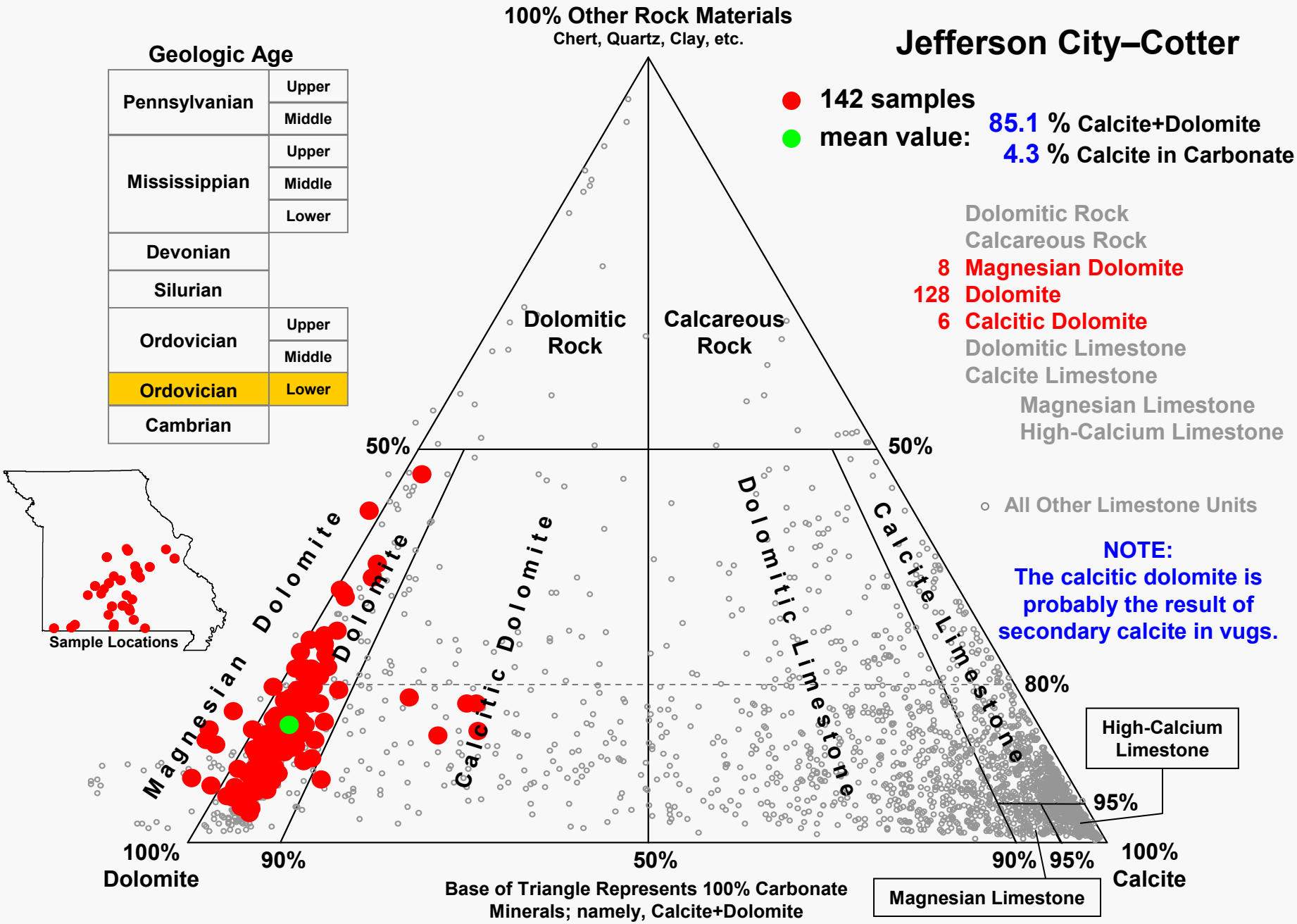

Pecatonica
14 samples
mean value:
92.8 % Calcite+Dolomite
82.9 % Calcite in Carbonate
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
12 Dolomitic Limestone
2 Calcite Limestone
Magnesian Limestone
1 High-Calcium Limestone
All Other Limestone Units
100% Other Rock Materials
Chert, Quartz, Clay, etc.
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
50%
50%
80%
95%
100% Dolomite
90%
50%
90%
95%
100% Calcite
High-Calcium Limestone
Magnesian Limestone
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite
Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian
Sample Locations

Joachim

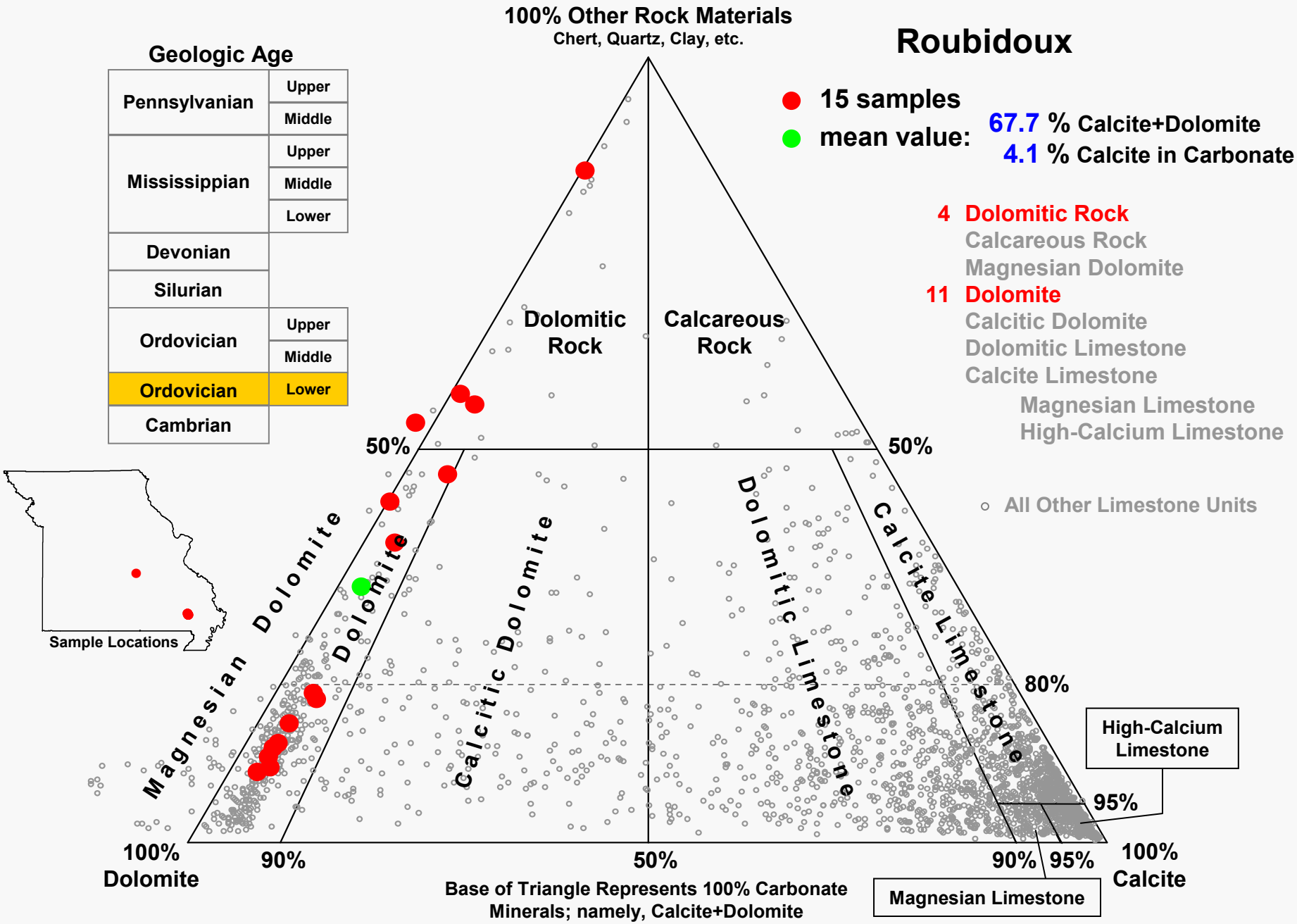

100% Other Rock Materials
Chert, Quartz, Clay, etc.
Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian
44 samples
mean value:
86.1 % Calcite+Dolomite
26.0 % Calcite in Carbonate
1 Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
16 Dolomite
19 Calcitic Dolomite
8 Dolomitic Limestone
Calcite Limestone
Magnesian Limestone
High-Calcium Limestone
All Other Limestone Units
NOTE:
Calcite Dominates in Units Younger than Joachim.
Dolomite Dominates in Units Older than Joachim.
Dolomitic Rock
Calcareous Rock
50%
50%
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
80%
95%
High-Calcium Limestone
Magnesian Limestone
100% Dolomite
90%
50%
90%
95%
100% Calcite
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite
Sample Locations

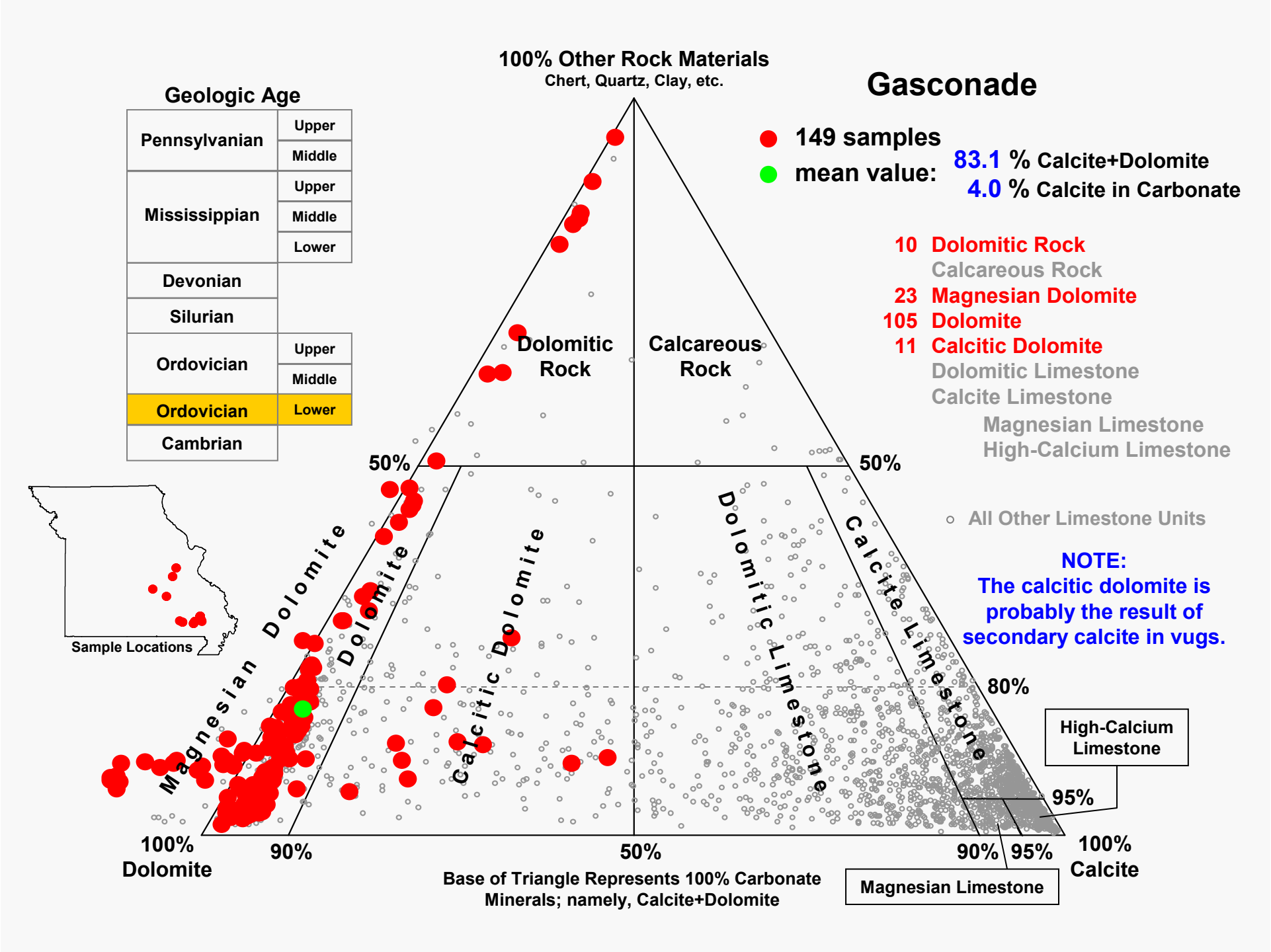

Cotter–Powell
100% Other Rock Materials
Chert, Quartz, Clay, etc.
7 samples
mean value:
85.2 % Calcite+Dolomite
5.4 % Calcite in Carbonate
Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
7 Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
Magnesian Limestone
High-Calcium Limestone
All Other Limestone Units
Sample Locations
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
50%
50%
80%
95%
High-Calcium Limestone
100% Dolomite
90%
50%
90%
95%
100% Calcite
Magnesian Limestone
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite

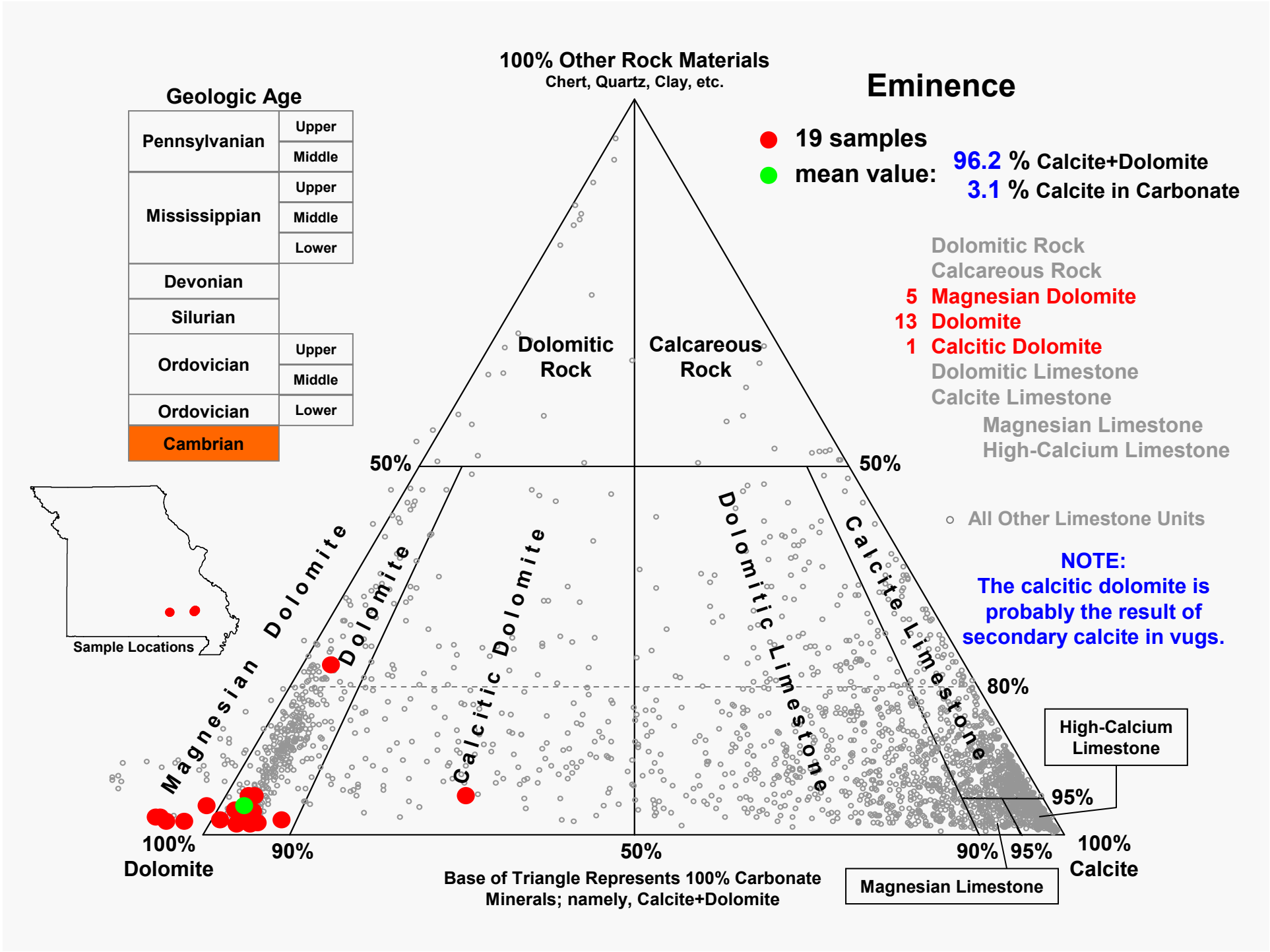
Jefferson City–Cotter

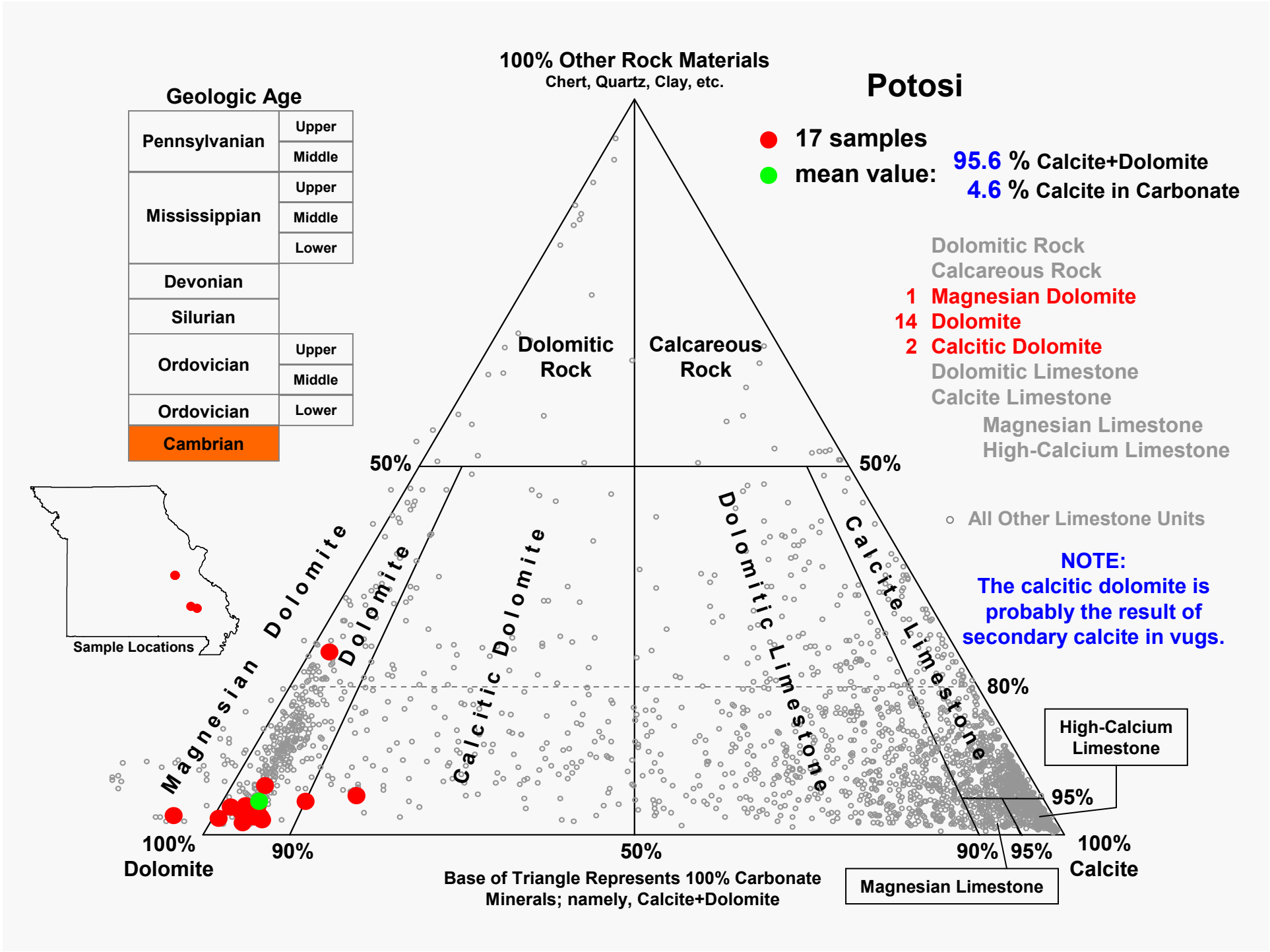


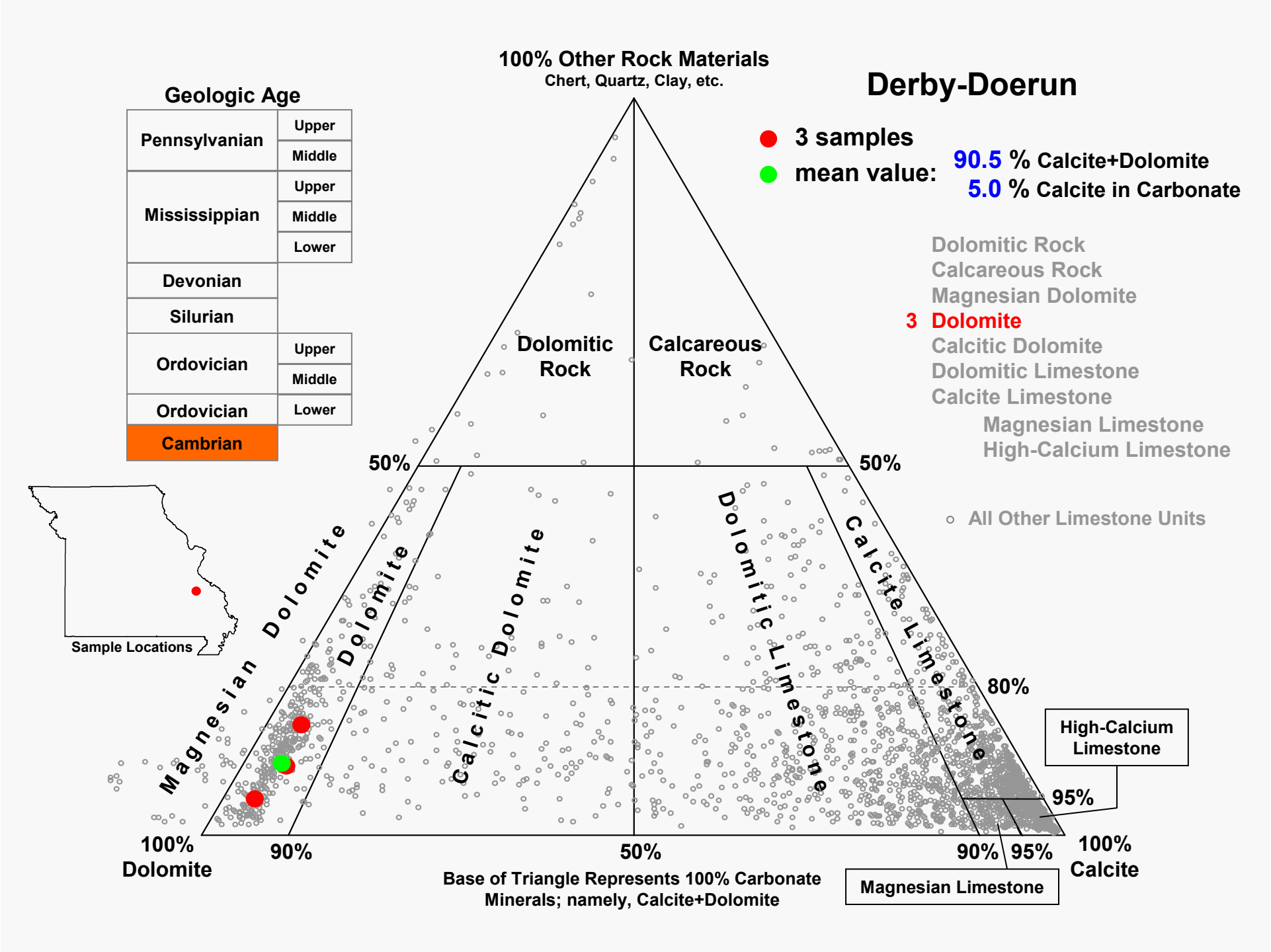
Roubidoux


100% Other Rock Materials
Chert, Quartz, Clay, etc.
Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian
15 samples
mean value:
67.7 % Calcite+Dolomite
4.1 % Calcite in Carbonate
4 Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
11 Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
Magnesian Limestone
High-Calcium Limestone
All Other Limestone Units
Dolomitic Rock
Calcareous Rock
50%
50%
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
80%
High-Calcium Limestone
95%
Sample Locations
100% Dolomite
90%
50%
90%
95%
100% Calcite
Magnesian Limestone
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite

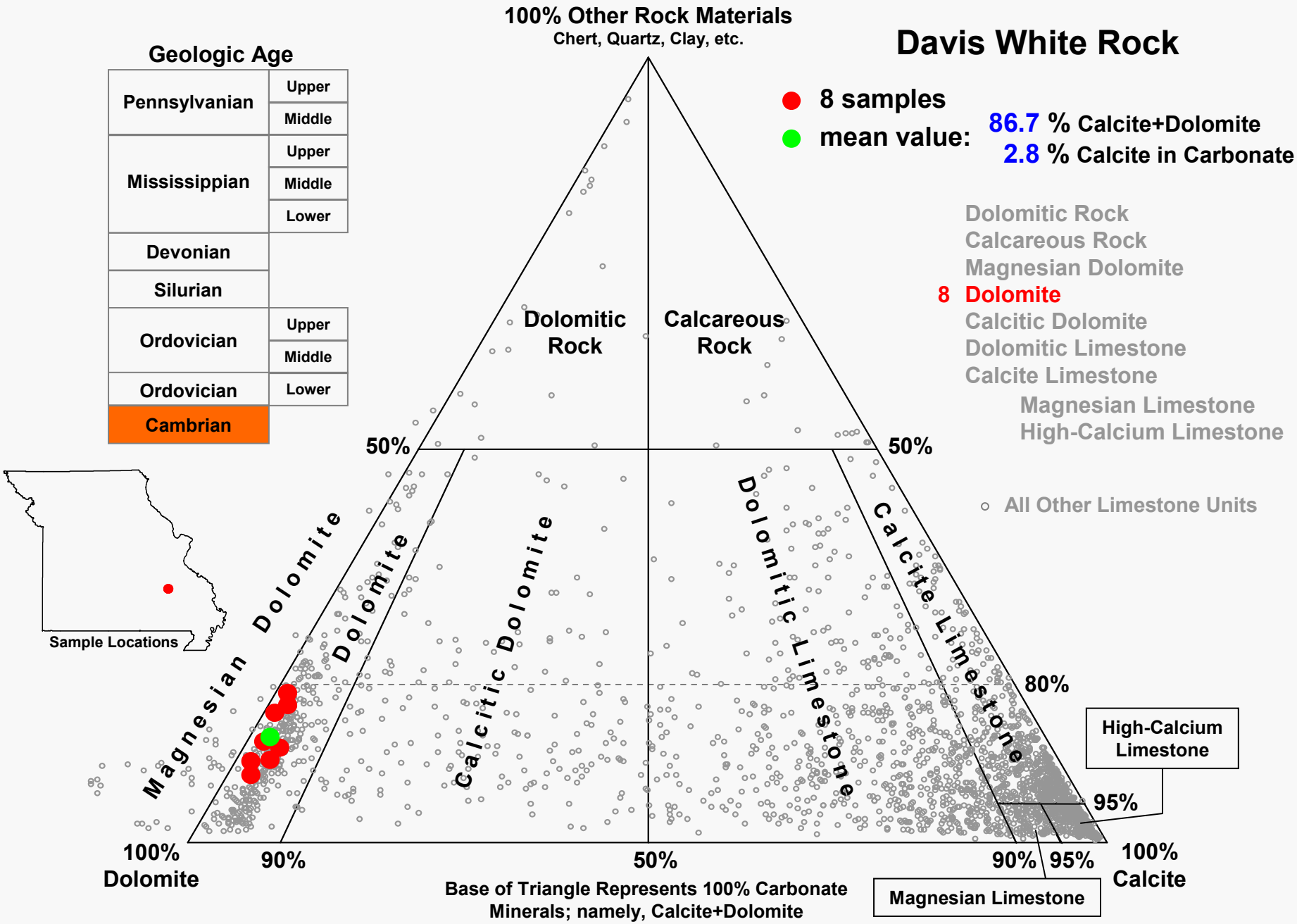

Gasconade
149 samples
mean value:
83.1 % Calcite+Dolomite
4.0 % Calcite in Carbonate
10 Dolomitic Rock
Calcareous Rock
23 Magnesian Dolomite
105 Dolomite
11 Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
Magnesian Limestone
High-Calcium Limestone
All Other Limestone Units
NOTE:
The calcitic dolomite is probably the result of secondary calcite in vugs.
100% Other Rock Materials
Chert, Quartz, Clay, etc.
Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
50%
50%
80%
95%
100% Dolomite
90%
50%
90%
95%
100% Calcite
High-Calcium Limestone
Magnesian Limestone
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite
Sample Locations

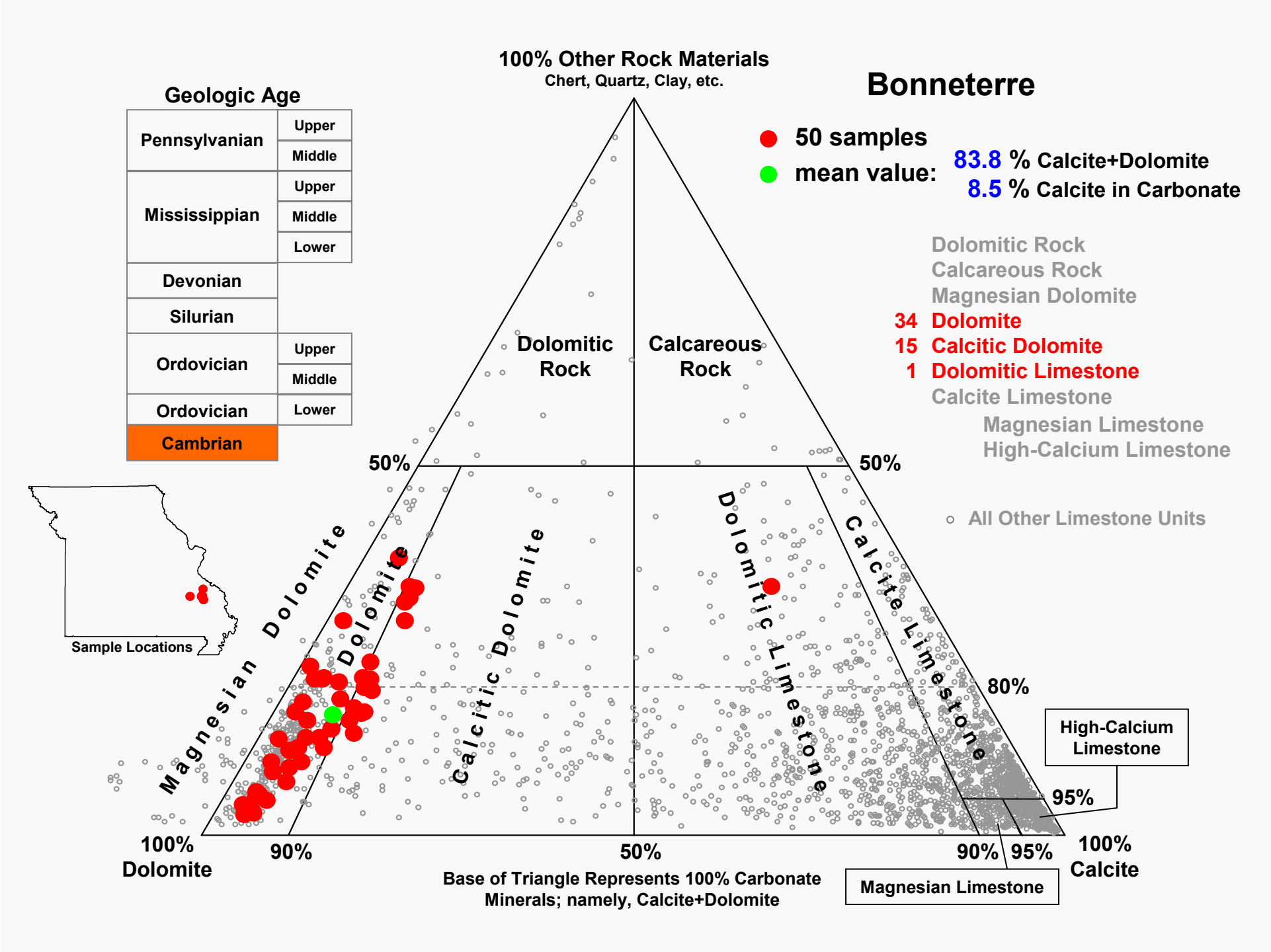

Eminence
19 samples
mean value:
96.2 % Calcite+Dolomite
3.1 % Calcite in Carbonate
Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian
100% Other Rock Materials
Chert, Quartz, Clay, etc.
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
50%
50%
80%
95%
90%
95%
100% Dolomite
90%
50%
100% Calcite
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite
High-Calcium Limestone
Magnesian Limestone
Sample Locations
Dolomitic Rock
Calcareous Rock
5 Magnesian Dolomite
13 Dolomite
1 Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
Magnesian Limestone
High-Calcium Limestone
All Other Limestone Units
NOTE:
The calcitic dolomite is probably the result of secondary calcite in vugs.


Potosi
17 samples
mean value:
95.6 % Calcite+Dolomite
4.6 % Calcite in Carbonate
Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian
100% Other Rock Materials
Chert, Quartz, Clay, etc.
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
50%
50%
80%
95%
100% Dolomite
90%
50%
90%
95%
100% Calcite
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite
Sample Locations
Dolomitic Rock
Calcareous Rock
1 Magnesian Dolomite
14 Dolomite
2 Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
Magnesian Limestone
High-Calcium Limestone
All Other Limestone Units
NOTE:
The calcitic dolomite is probably the result of secondary calcite in vugs.
High-Calcium Limestone
Magnesian Limestone

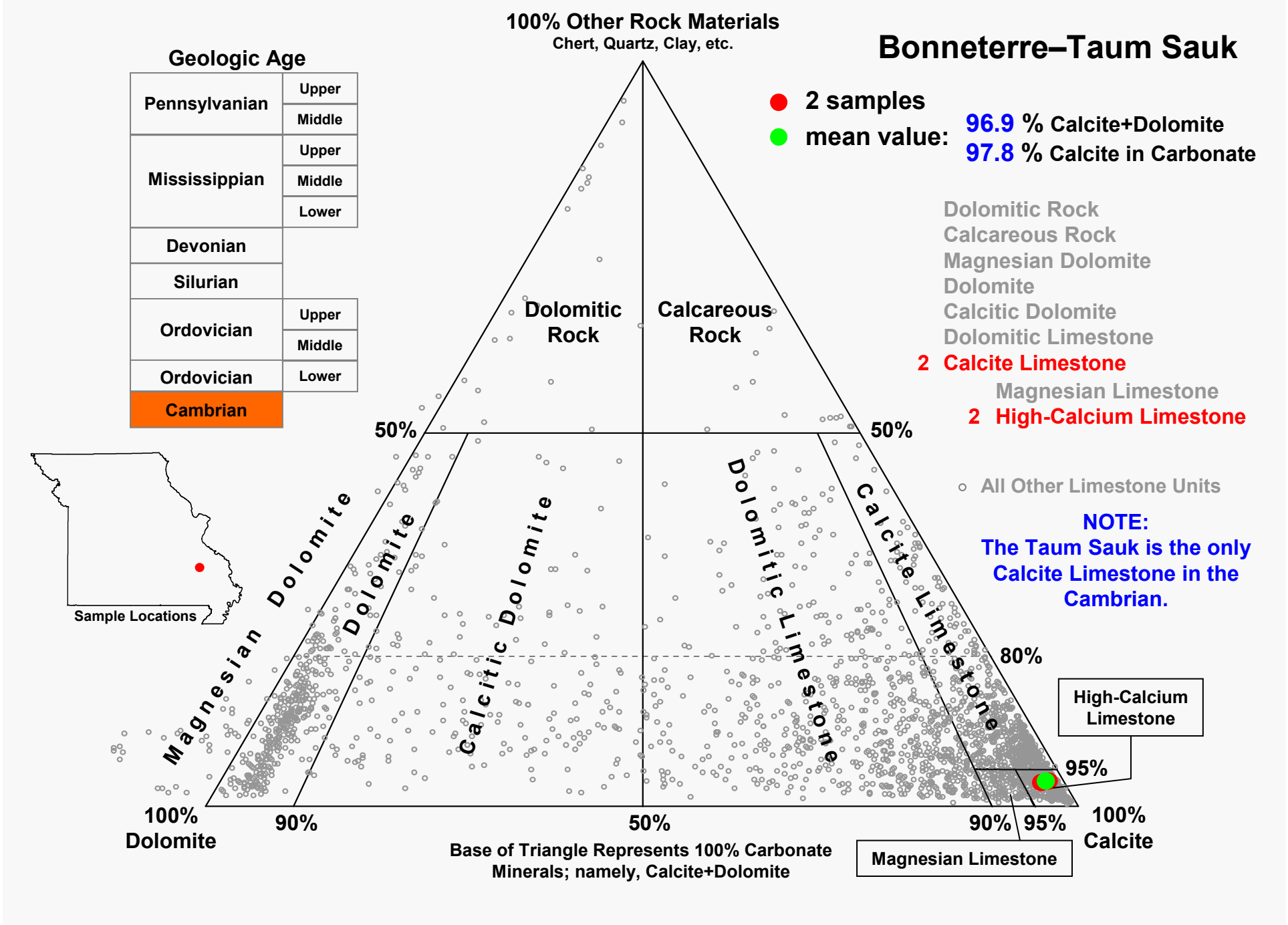

Derby-Doerun
3 samples
mean value:
90.5 % Calcite+Dolomite
5.0 % Calcite in Carbonate
Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian
100% Other Rock Materials
Chert, Quartz, Clay, etc.
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
50%
50%
80%
95%
100% Dolomite
90%
50%
90%
95%
100% Calcite
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite
High-Calcium Limestone
Magnesian Limestone
Sample Locations
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
3 Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
Magnesian Limestone
High-Calcium Limestone
All Other Limestone Units

Davis White Rock




Bonneterre
50 samples
mean value:
83.8 % Calcite+Dolomite
8.5 % Calcite in Carbonate
Geologic Age
Pennsylvanian
Upper
Middle
Mississippian
Upper
Middle
Lower
Devonian
Silurian
Ordovician
Upper
Middle
Ordovician
Lower
Cambrian
100% Other Rock Materials
Chert, Quartz, Clay, etc.
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
Dolomite
Calcitic Dolomite
Dolomitic Limestone
Calcite Limestone
50%
50%
80%
95%
100% Dolomite
90%
50%
90%
95%
100% Calcite
Base of Triangle Represents 100% Carbonate Minerals; namely, Calcite+Dolomite
Sample Locations
Dolomitic Rock
Calcareous Rock
Magnesian Dolomite
34 Dolomite
15 Calcitic Dolomite
1 Dolomitic Limestone
Calcite Limestone
Magnesian Limestone
High-Calcium Limestone
All Other Limestone Units
High-Calcium Limestone
Magnesian Limestone

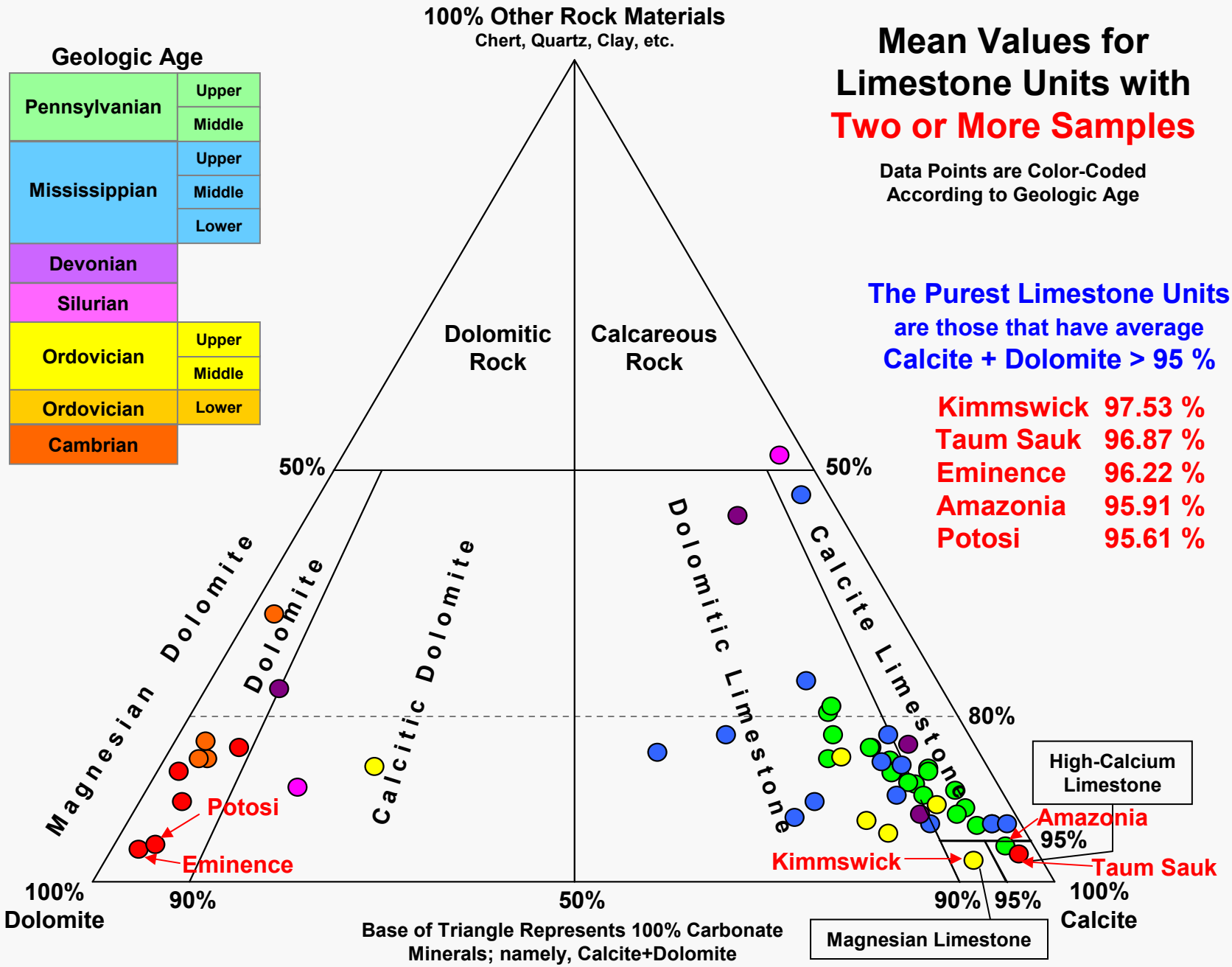
Bonneterre–Taum Sauk



STRATIGRAPHIC SUMMARY

Mean Values for Limestone Units with Two or More Samples

Data Points are Color-Coded According to Geologic Age



The Purest Limestone Units are those that have average Calcite + Dolomite > 95 %

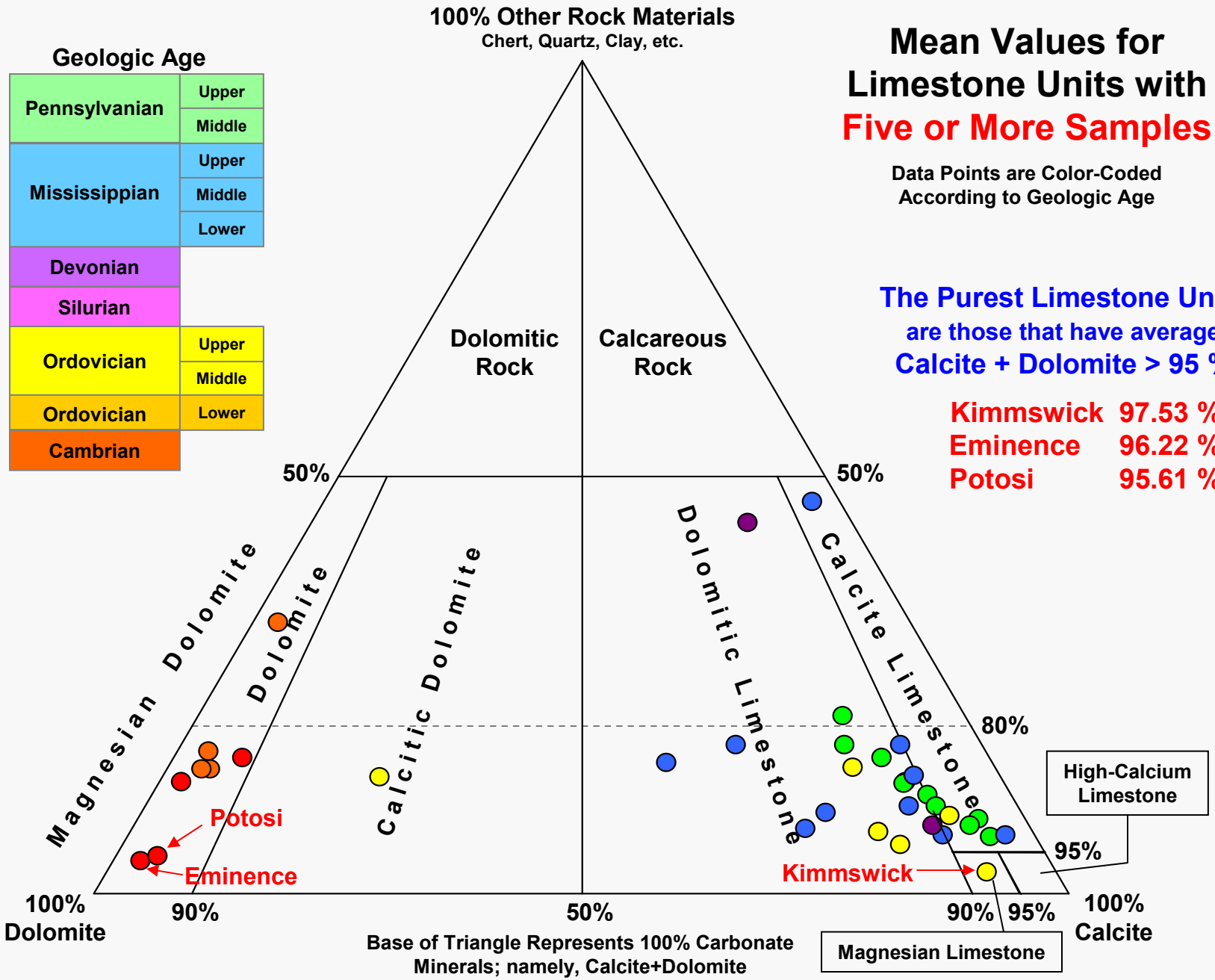
Kimmswick	97.53 %
Taum Sauk	96.87 %
Eminence	96.22 %
Amazonia	95.91 %
Potosi	95.61 %

Mean Values for Limestone Units with Five or More Samples

Data Points are Color-Coded According to Geologic Age

The Purest Limestone Units are those that have average Calcite + Dolomite > 95 %

Kimmswick	97.53 %
Eminence	96.22 %
Potosi	95.61 %

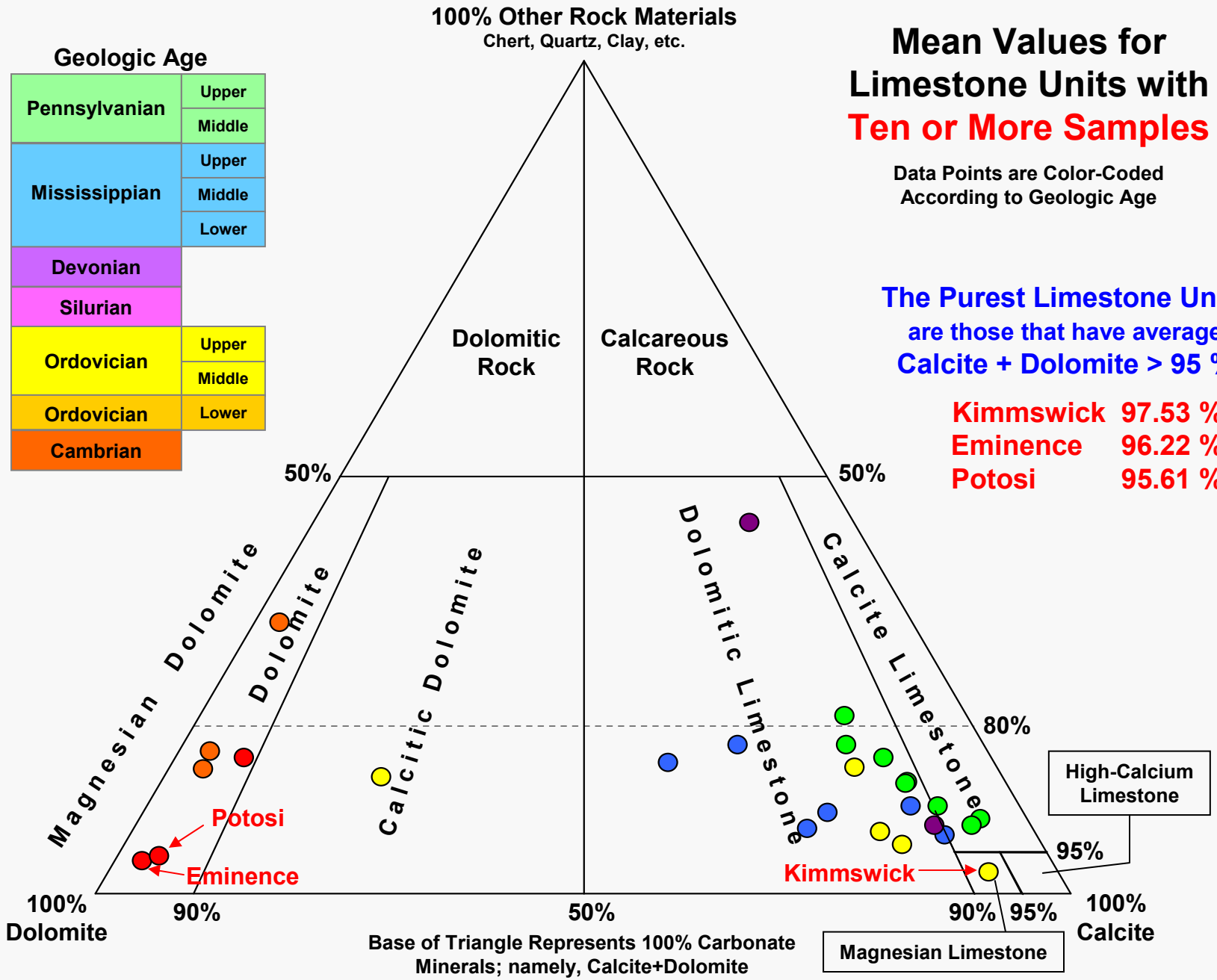


Mean Values for Limestone Units with Ten or More Samples

Data Points are Color-Coded According to Geologic Age

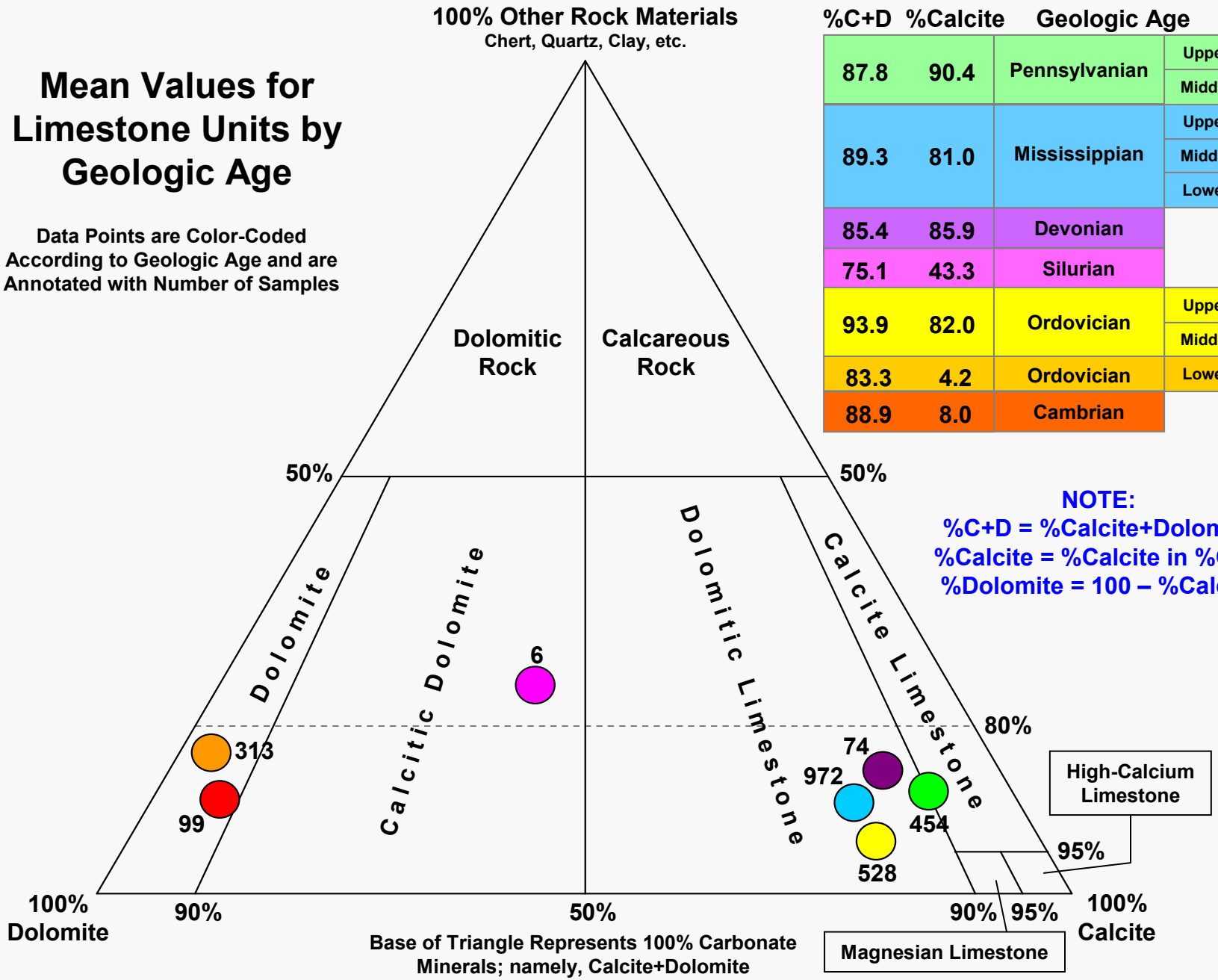
The Purest Limestone Units are those that have average Calcite + Dolomite > 95 %

Kimmswick	97.53 %
Eminence	96.22 %
Potosi	95.61 %



Mean Values for Limestone Units by Geologic Age

Data Points are Color-Coded According to Geologic Age and are Annotated with Number of Samples



%C+D	%Calcite	Geologic Age	
87.8	90.4	Pennsylvanian	Upper
			Middle
89.3	81.0	Mississippian	Upper
			Middle
			Lower
85.4	85.9	Devonian	
75.1	43.3	Silurian	
93.9	82.0	Ordovician	Upper
			Middle
83.3	4.2	Ordovician	Lower
88.9	8.0	Cambrian	

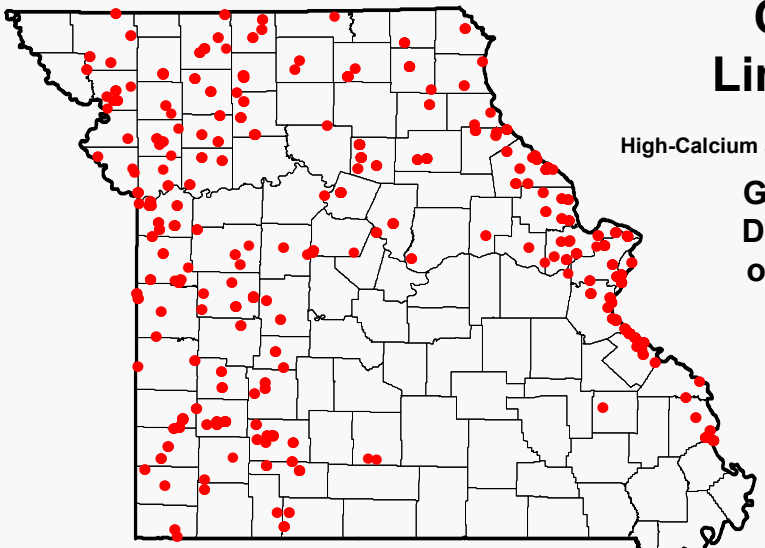
NOTE:
%C+D = %Calcite+Dolomite
%Calcite = %Calcite in %C+D
%Dolomite = 100 – %Calcite

GEOGRAPHIC SUMMARY

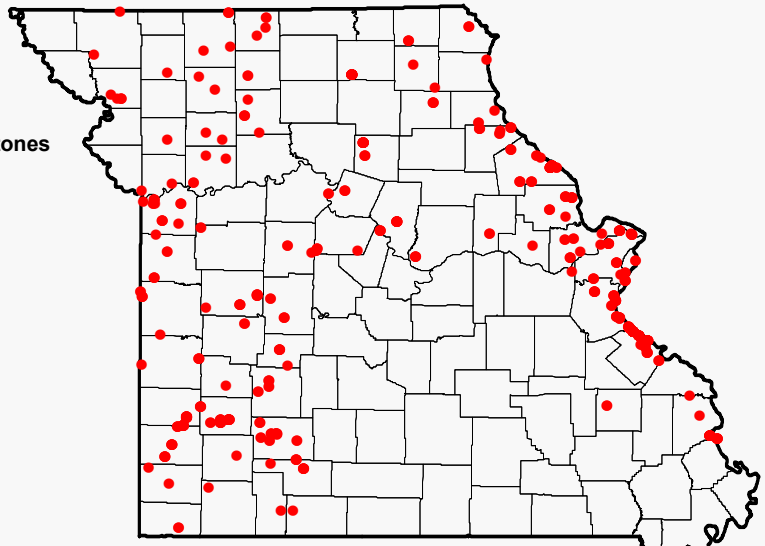
Calcite Limestone

Includes
High-Calcium and Magnesian Limestones

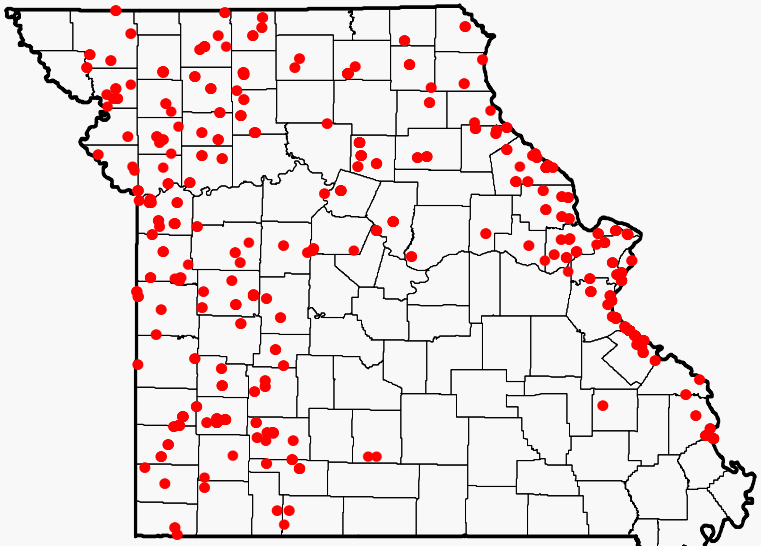
Geographic Distribution of Samples



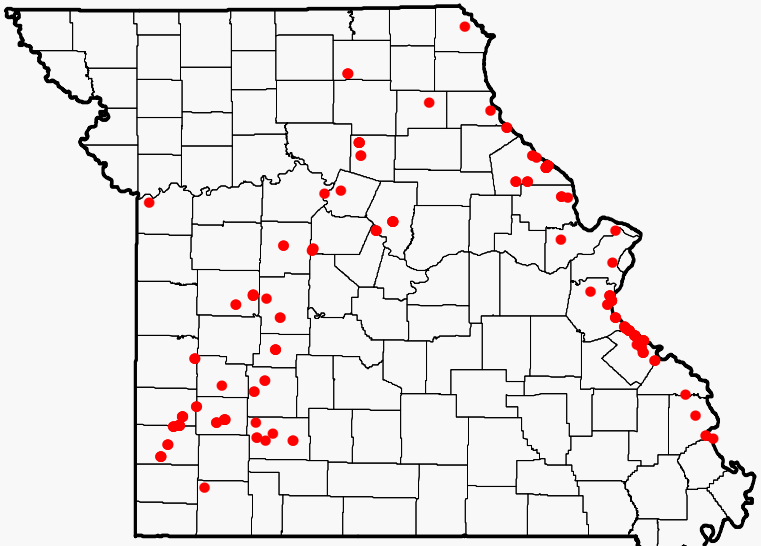
Total Carbonate > 50%



Total Carbonate > 95%



Total Carbonate > 80%

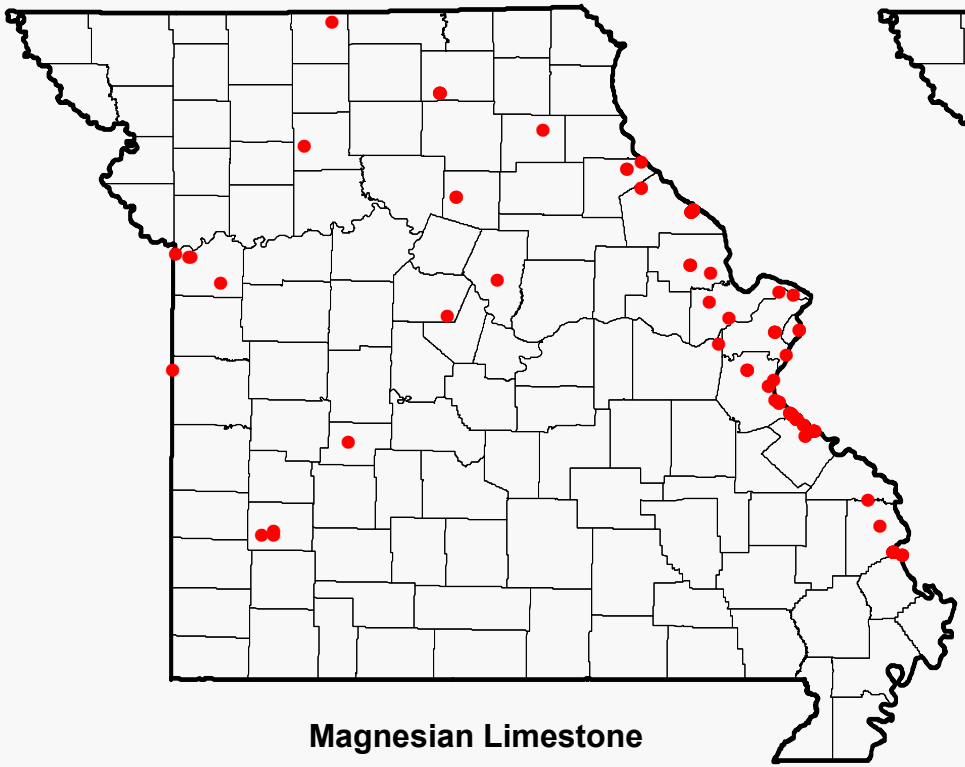


Total Carbonate > 98%

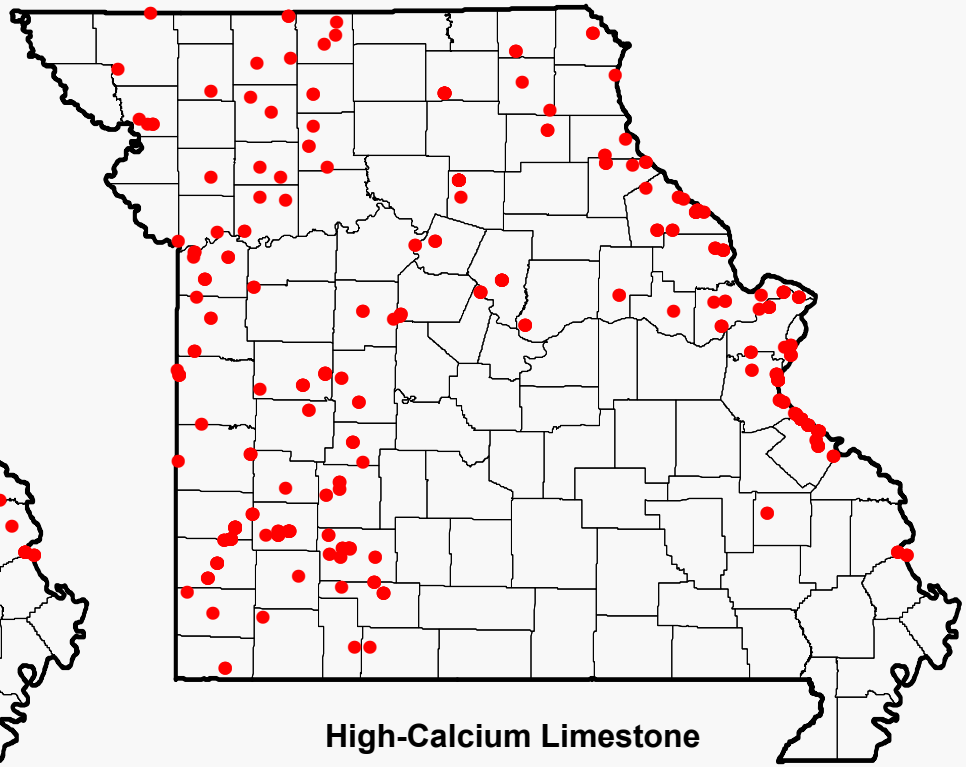
Calcite Limestone

with
Total Carbonate > 95%

Geographic Distribution of Samples



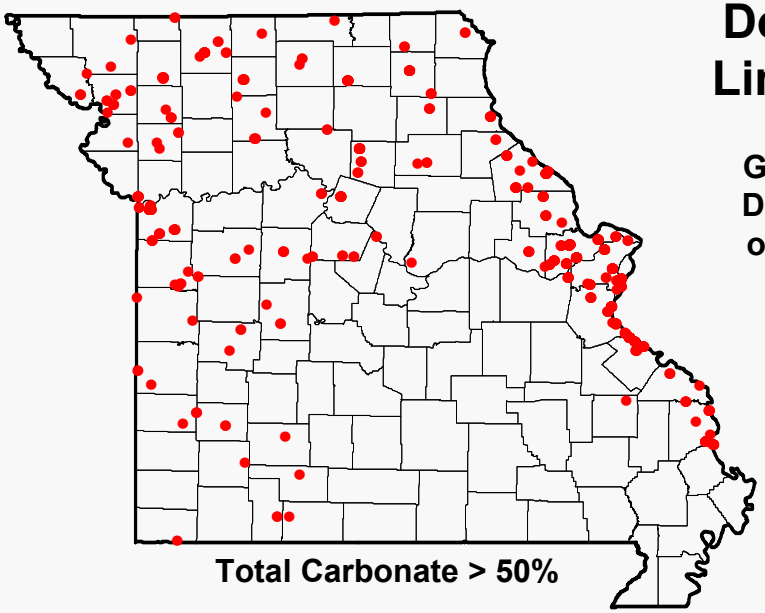
Magnesian Limestone



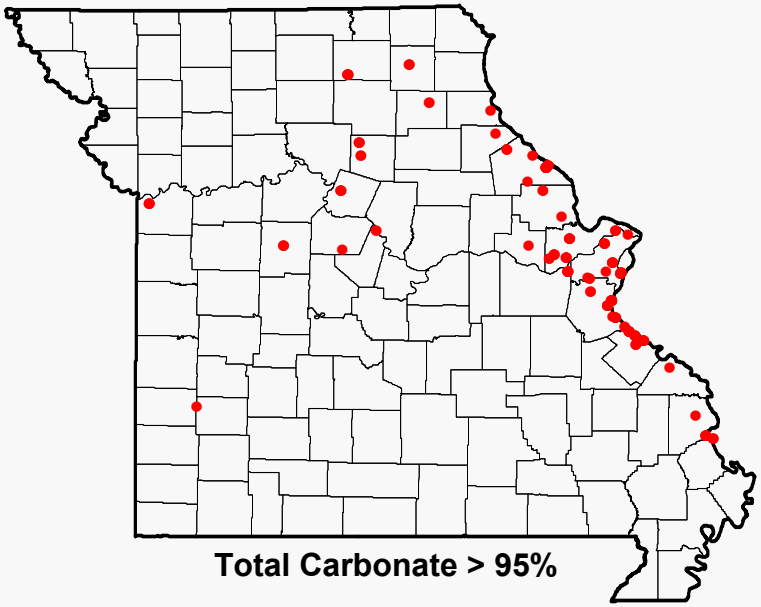
High-Calcium Limestone

Dolomitic Limestone

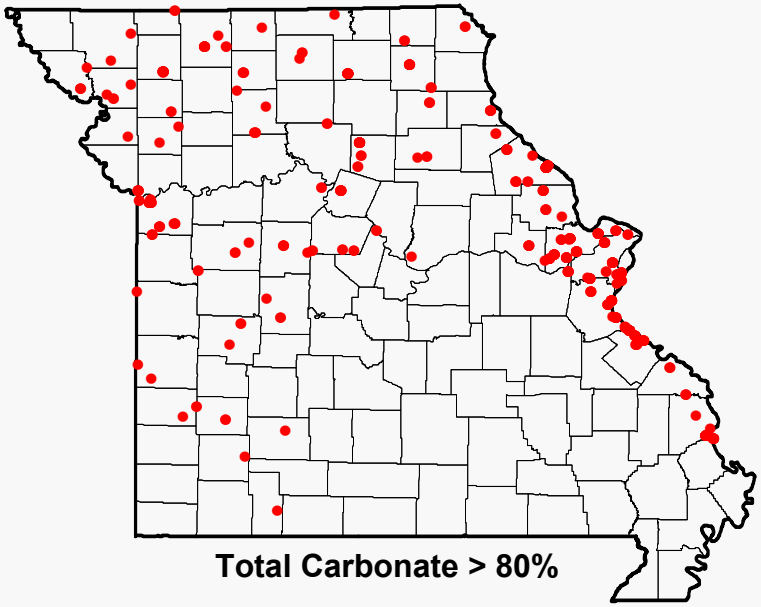
Geographic Distribution of Samples



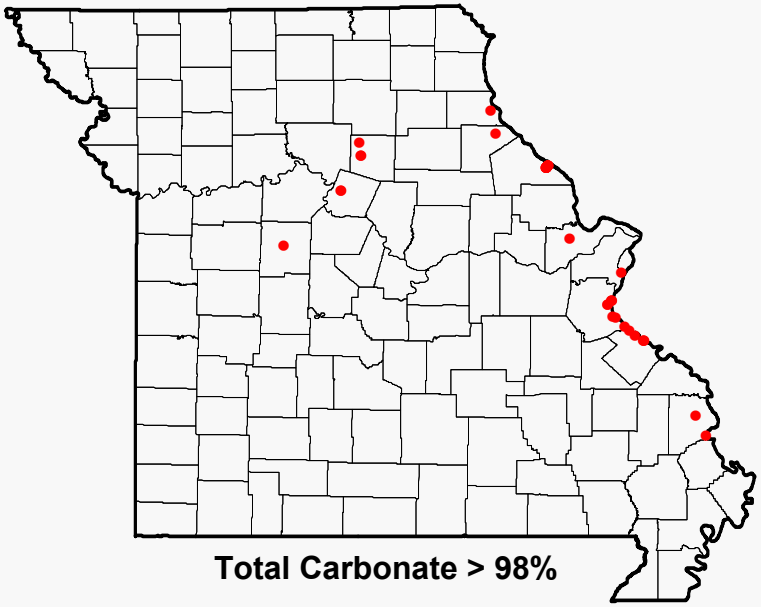
Total Carbonate > 50%



Total Carbonate > 95%



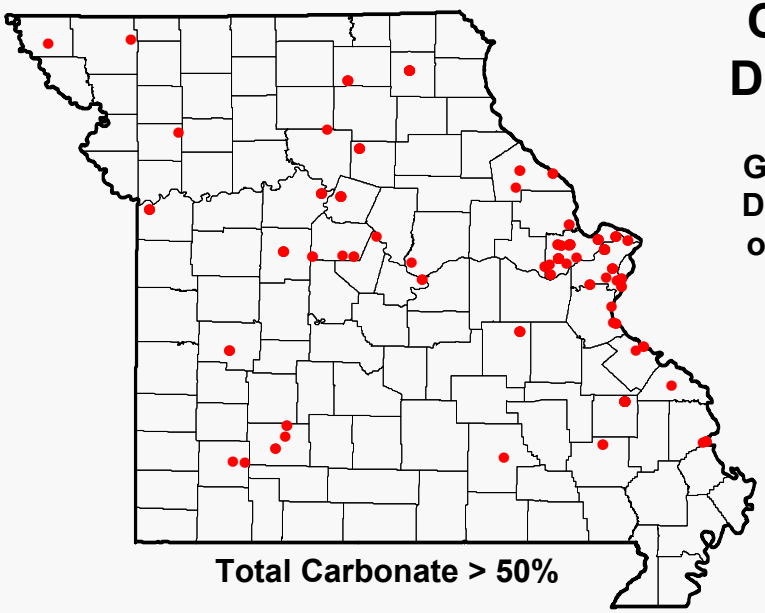
Total Carbonate > 80%



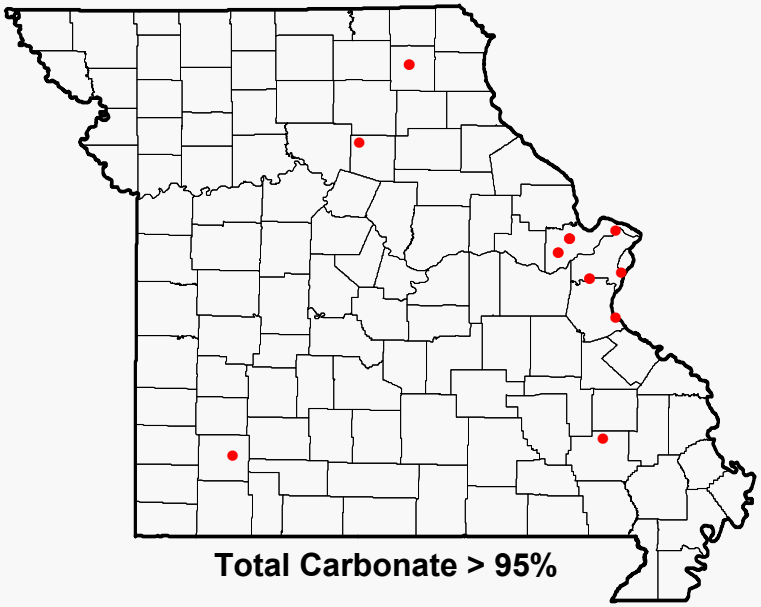
Total Carbonate > 98%

Calcitic Dolomite

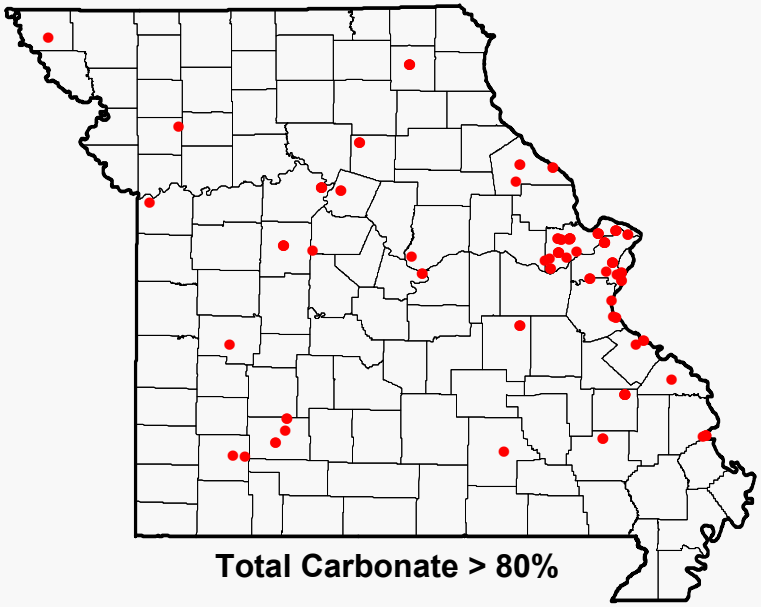
Geographic Distribution of Samples



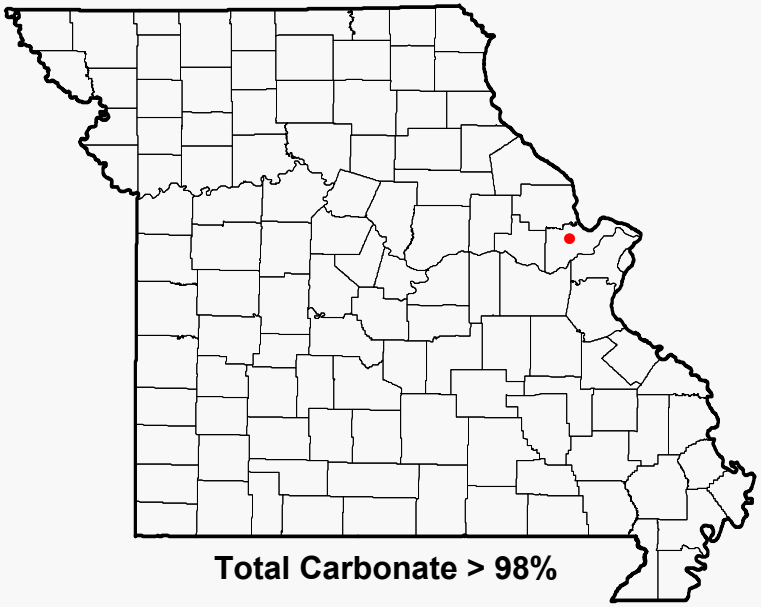
Total Carbonate > 50%



Total Carbonate > 95%



Total Carbonate > 80%

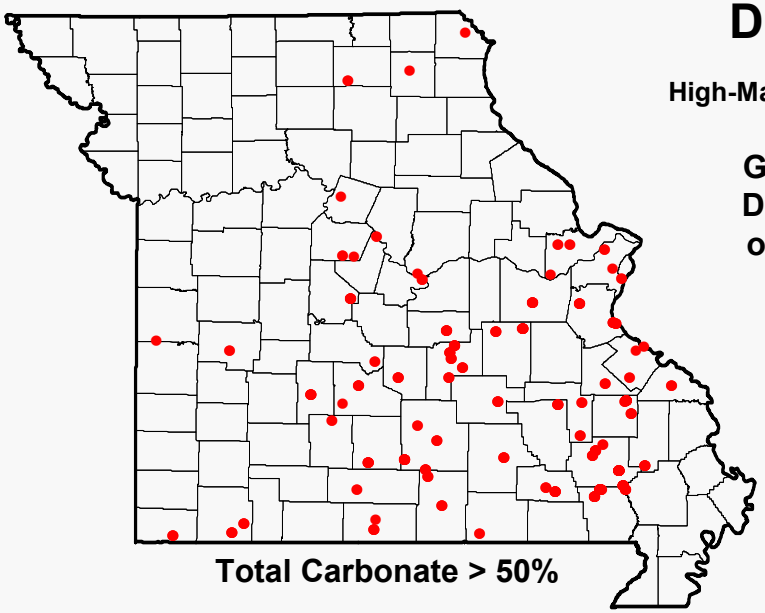


Total Carbonate > 98%

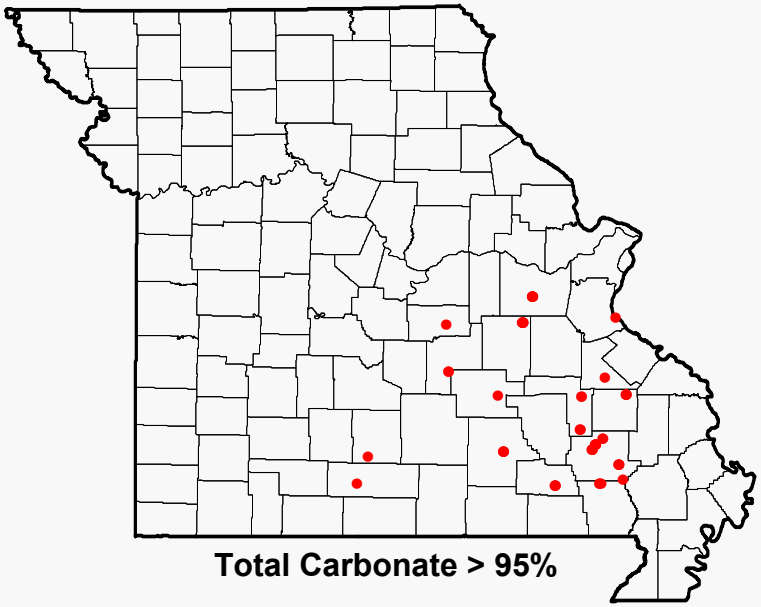
Dolomite

Includes
High-Magnesian Dolomite

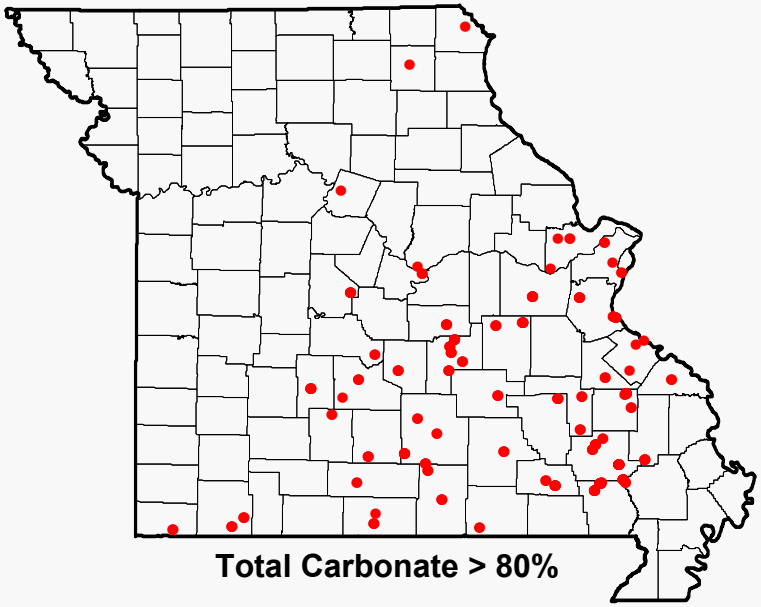
Geographic
Distribution
of Samples



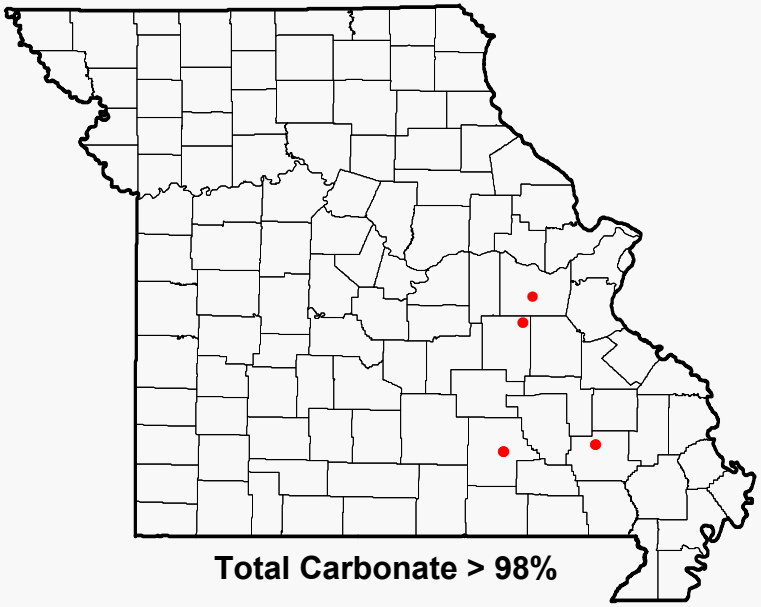
Total Carbonate > 50%



Total Carbonate > 95%



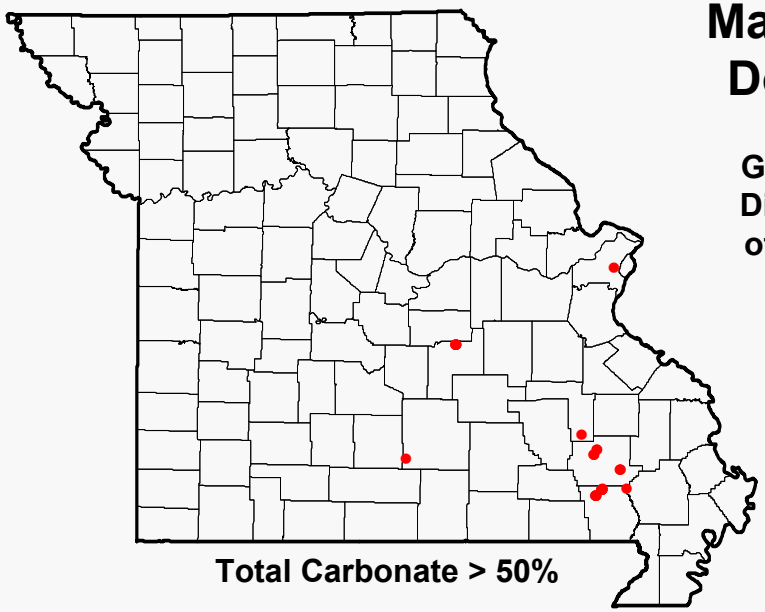
Total Carbonate > 80%



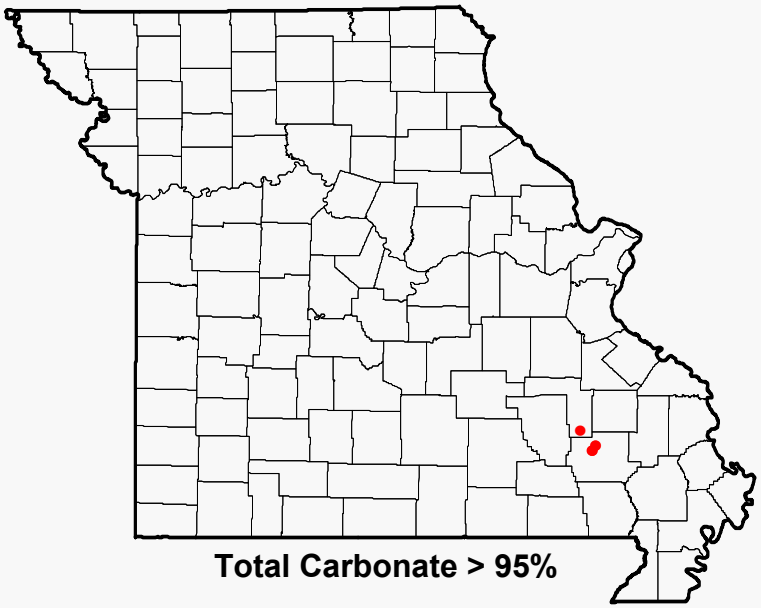
Total Carbonate > 98%

Magnesian Dolomite

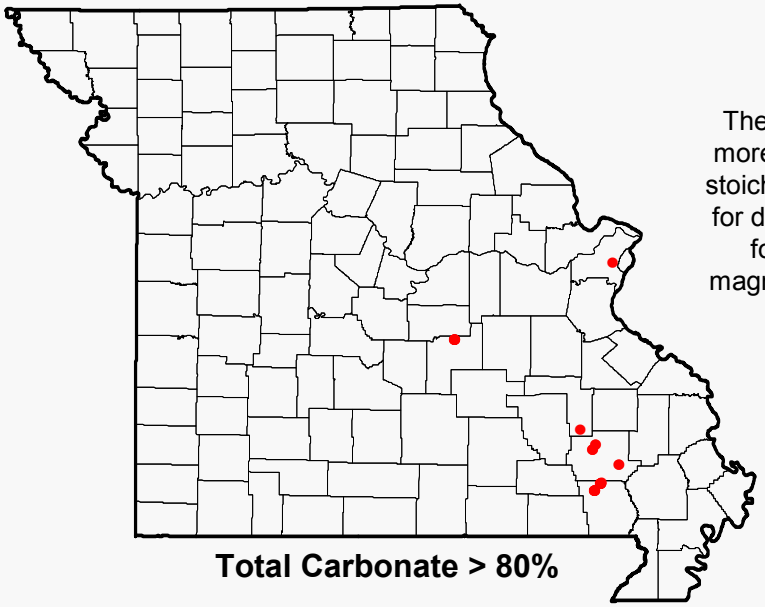
Geographic Distribution of Samples



Total Carbonate > 50%

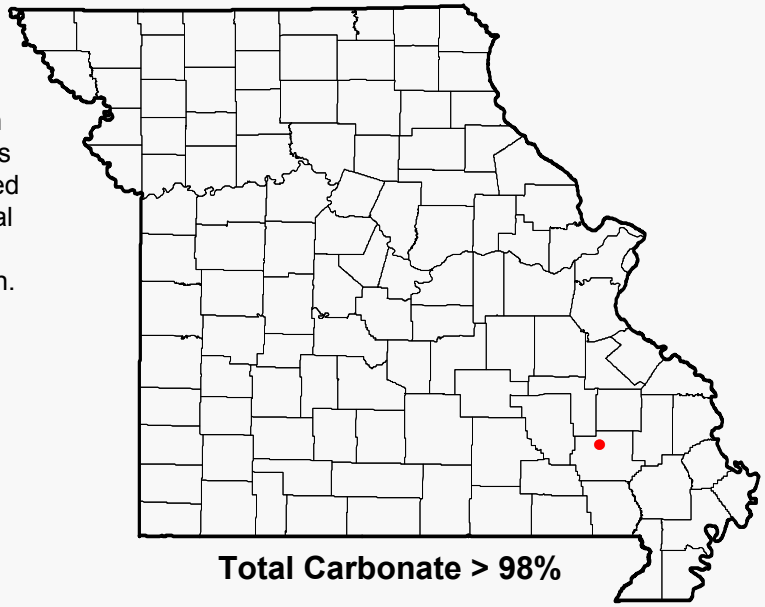


Total Carbonate > 95%



Total Carbonate > 80%

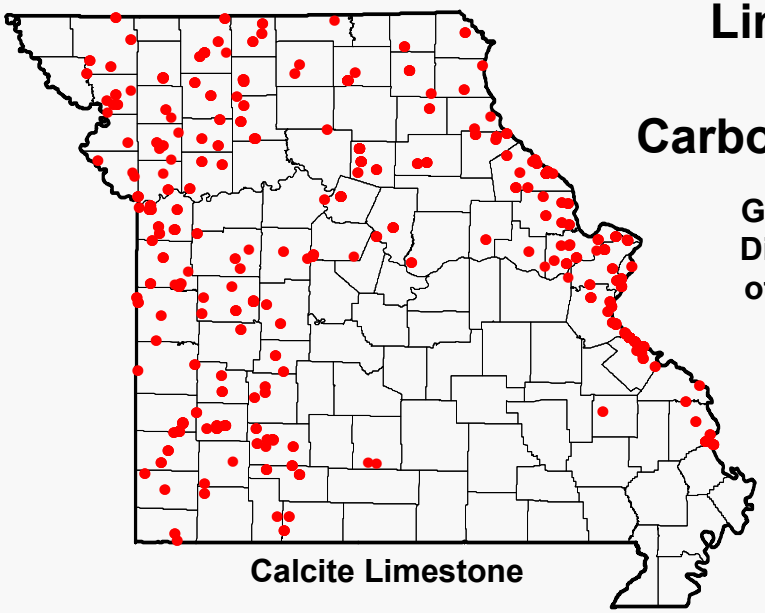
These samples contain more magnesium than is stoichiometrically required for dolomite. The mineral form of the excess magnesium is not known.



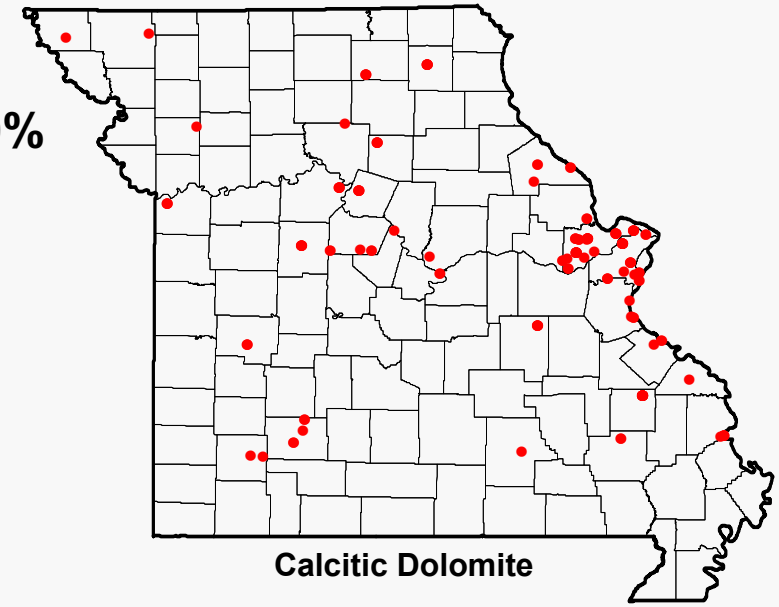
Total Carbonate > 98%

Limestone with Carbonate > 50%

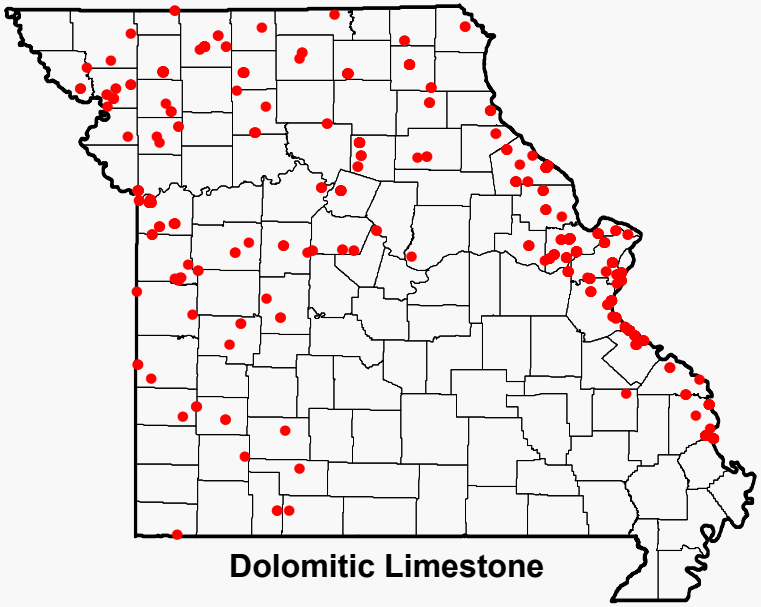
Geographic Distribution of Samples



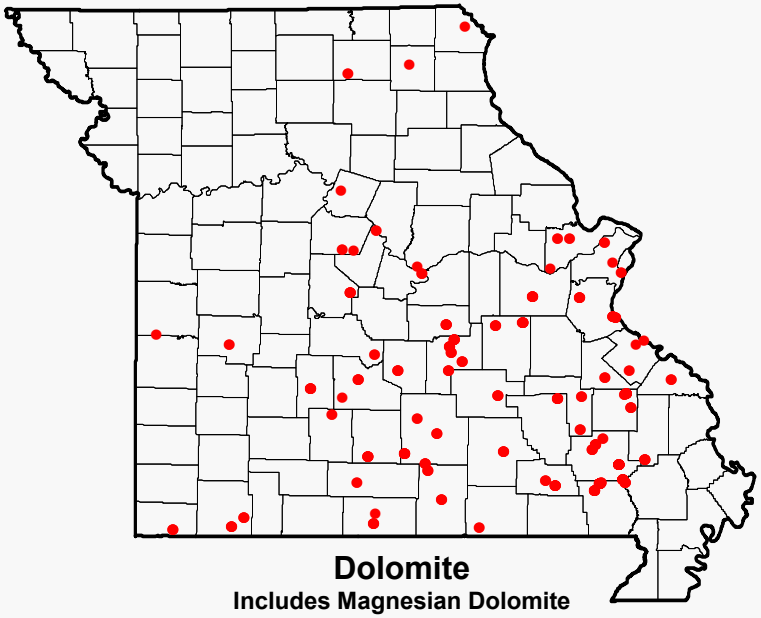
Calcite Limestone



Calcitic Dolomite



Dolomitic Limestone

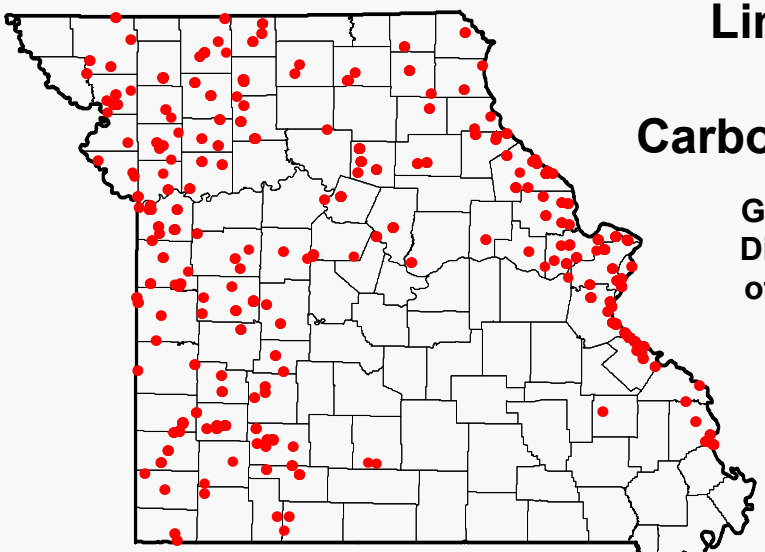


Dolomite

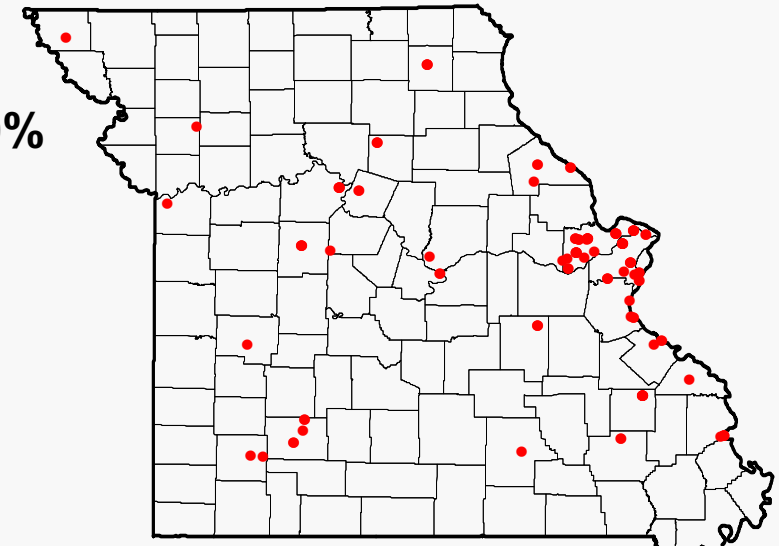
Includes Magnesian Dolomite

Limestone with Carbonate > 80%

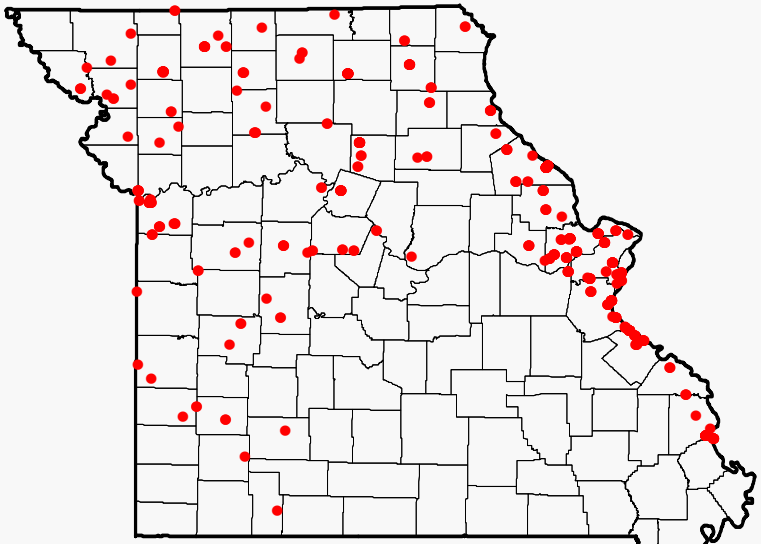
Geographic Distribution of Samples



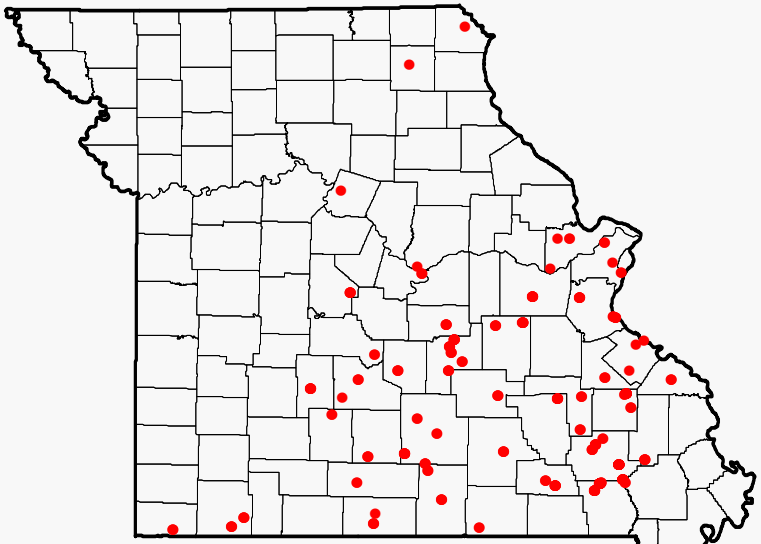
Calcite Limestone



Calcitic Dolomite



Dolomitic Limestone

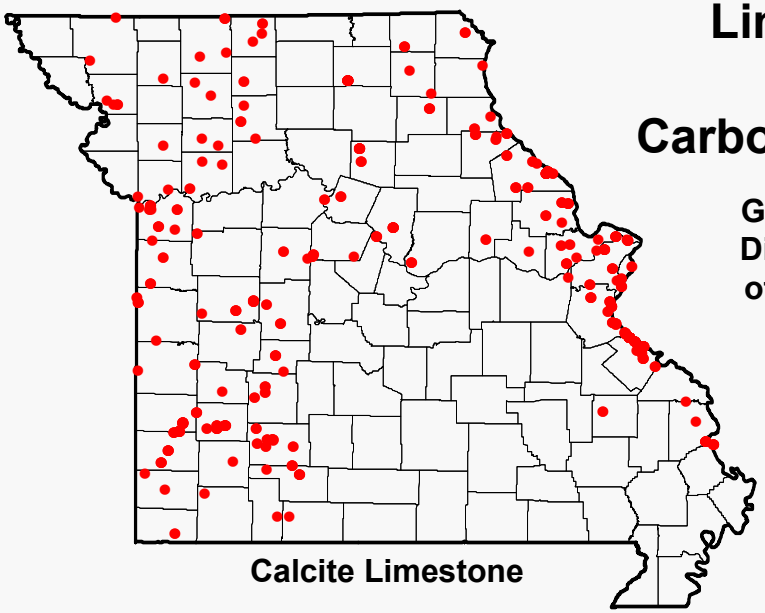


Dolomite

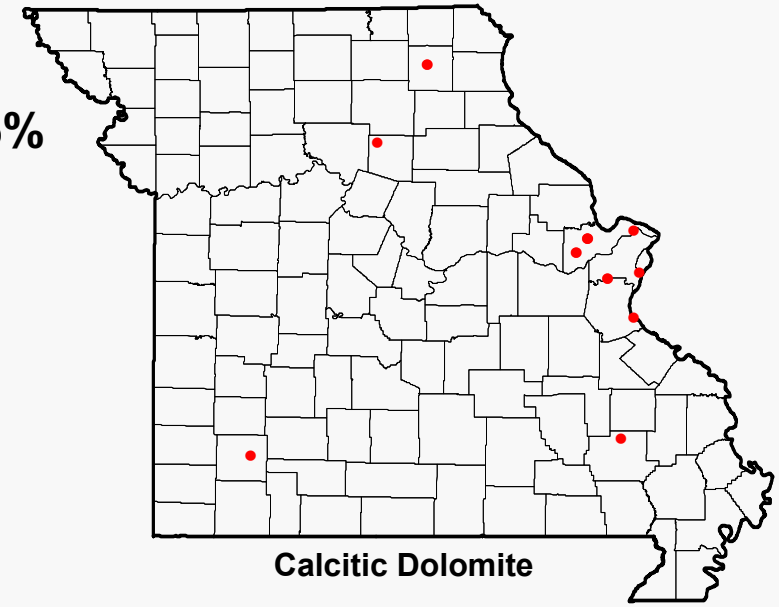
Includes Magnesian Dolomite

Limestone with Carbonate > 95%

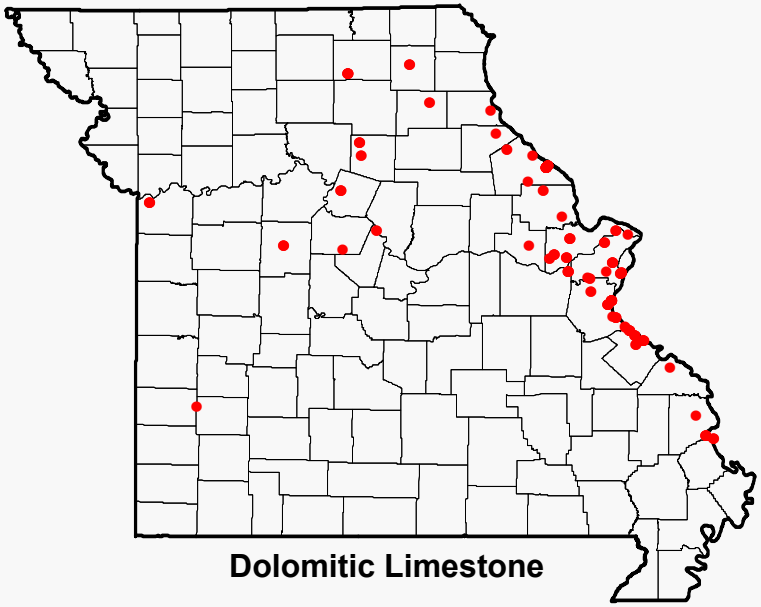
Geographic Distribution of Samples



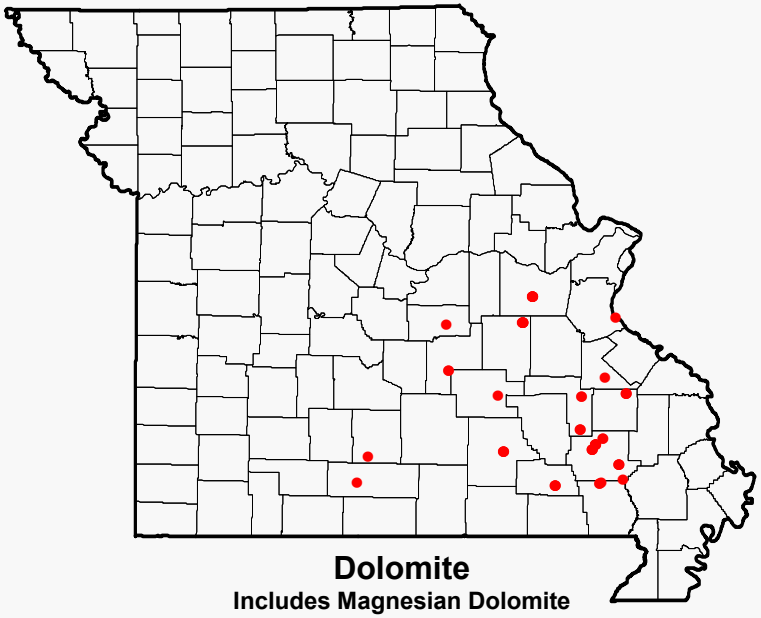
Calcite Limestone



Calcitic Dolomite



Dolomitic Limestone

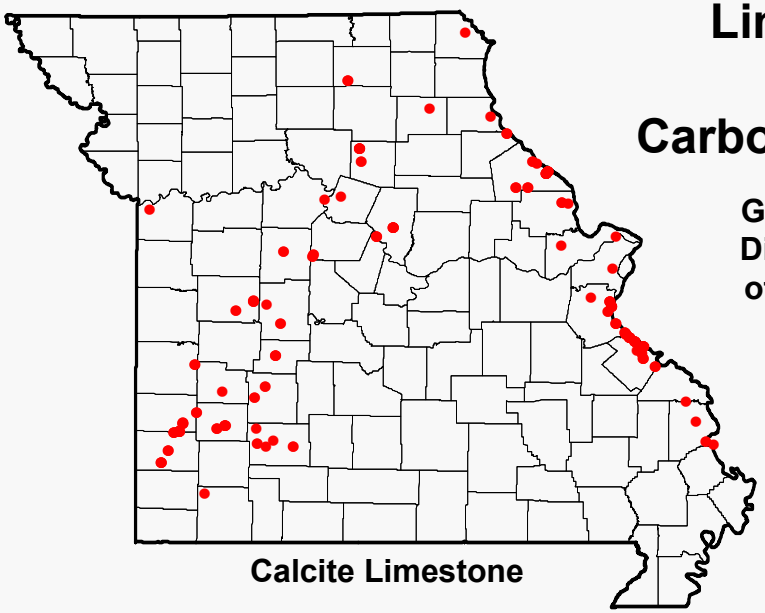


Dolomite

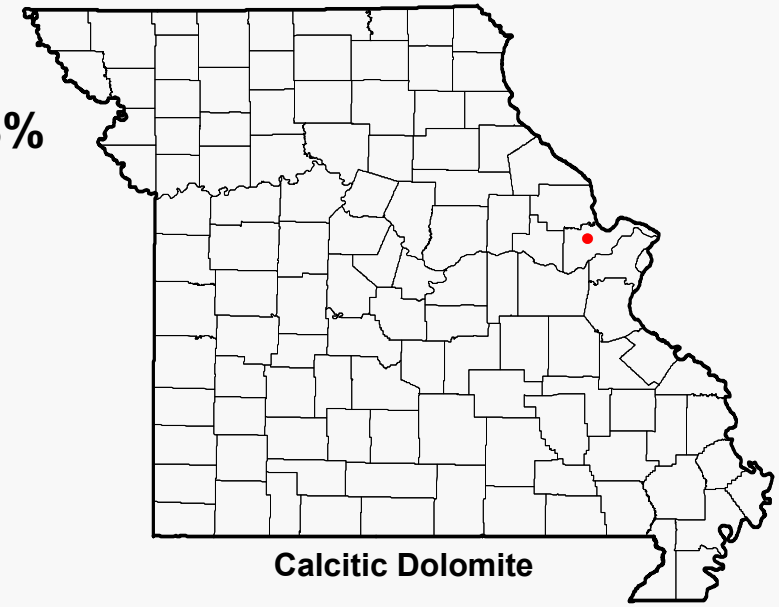
Includes Magnesian Dolomite

Limestone with Carbonate > 98%

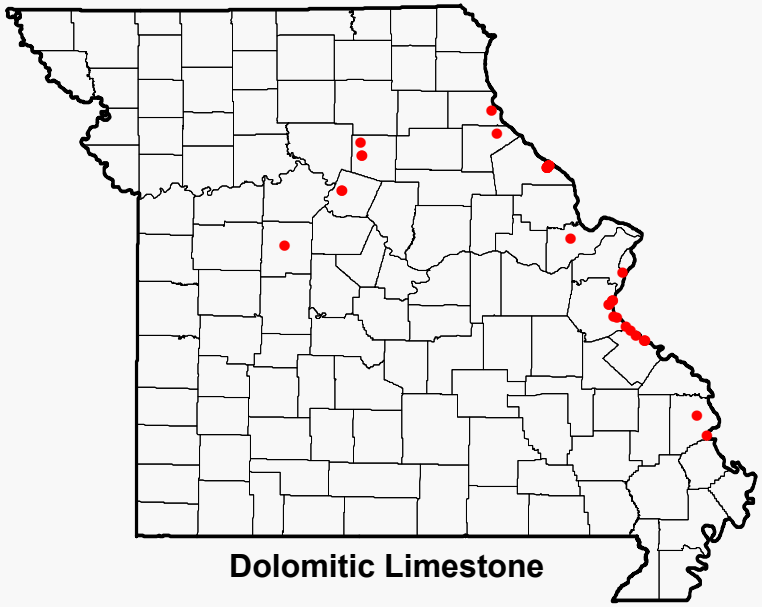
Geographic Distribution of Samples



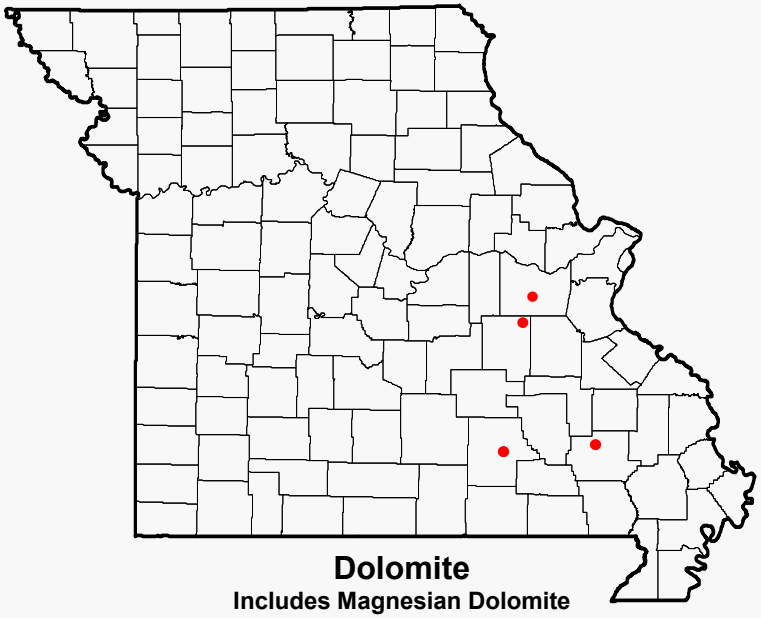
Calcite Limestone



Calcitic Dolomite



Dolomitic Limestone



Dolomite

Includes Magnesian Dolomite