

## Appendix D

### Key to Sagebrushes (*Artemisia*) of Wyoming

David Tart and Alma Winward  
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- 1a. Persistent leaves all or mostly entire, linear to narrowly lanceolate.  
2a. Mature plants 3 to 5 feet tall. Leaves strongly silvery-green pubescent.  
Outer involucral bracts canescent . . . . . ***A. cana* ssp. *cana***



- 2b. Mature plants less than 40 inches tall. Leaves sparsely pubescent and gray-green. Outer involucral bracts sparsely pubescent . . . . . ***A. cana* ssp. *viscidula***

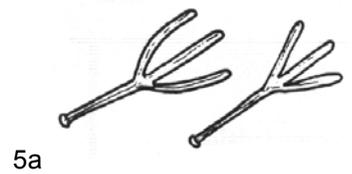


- 1b. Persistent leaves 3-lobed or deeply 3-cleft.

- 3a. Persistent leaves deeply cleft (lobes 3 times as long as wide or longer).

- 4a. Inflorescence a narrow to open panicle. Upper bracts of inflorescence much longer than the flower heads. The basal part of the leaf no wider than the lobes.

- 5a. Mature plants 1 to 3 feet tall. Leaves rarely over 2cm long.  
Panicle open to narrow. . . . . ***A. tripartita* ssp. *tripartita***



- 5b. Mature plants less than 10 inches tall. Leaves often over 2cm long. Panicle narrow. . . . . ***A. tripartita* ssp. *rupicola***

- 4b. Inflorescence a sparse spike or raceme. Upper bracts of inflorescence shorter to only slightly longer than the flower heads. The basal part of the leaf wedge-shaped (widened below the teeth). . . . . ***A. arbuscula* ssp. *thermopola***



- 3b. Persistent leaves shallowly lobed (lobes less than 3 times as long as wide).



- 6a. Persistent leaves bell-shaped with middle lobe overlapping the two outer teeth.



- 7a. Inflorescence a sparse spike or raceme, flowering by mid summer, mature plants less than 20 inches tall. . . . . ***A. longiloba***

7b. Inflorescence a raceme or narrow panicle,  
 flowering in early fall, mature plants 18 to 36  
 inches tall. . . . . **A. "g."** (Bonneville sagebrush)

6b. Middle lobe of persistent leaves rarely overlaps the two outer lobes.



6b

8a. Mature plants less than 20 inches tall.

9a. Inflorescence with brown stalks that persist into the following year.  
 Leaves dark green, shiny, and sticky. . . . . **A. nova**

9b. Inflorescence with gray, weakly persistent stalks.  
 Leaves grayish green, not shiny or sticky.

10a. Inflorescence a narrow panicles; the heads  
 clustered. . . . . **A. tridentata ssp. wyomingensis**

10b. Inflorescence a sparse spike or raceme; the heads  
 single or 2 to 3 together. . . . . **A. arbuscula ssp. arbuscula**

8b. Mature plants over 20 inches tall.

11a. Uneven-topped shrubs with flowering and vegetative twigs intermingled.

12a. Mature plants mostly over 40 inches tall, often with a discernable  
 main trunk. Persistent leaves 4 times as long as wide or longer  
 with straight margins. . . . . **A. tridentata ssp. tridentata**



12a

12b. Mature plants mostly less than 40 inches tall, often quite  
 branched from near base with no discernable main trunk.  
 Persistent leaves less than 4 times as long as wide with curved  
 margins. . . . . **A. tridentata ssp. wyomingensis**



12b

11b. Even-topped shrubs with flowering stalks well elevated above the  
 vegetative twigs; the flowering stalks mostly over twice as long as the  
 subtending vegetative twigs.

13a. Mature seed heads present; individual flowers  
 discernable. . . . . FLORAL KEY (14)

13b. Seed heads immature; individual flowers  
 not discernable. . . . . VEGETATIVE KEY (18)

**FLORAL KEY**

14a. Heads with a maximum of 6 flowers or less.

15a. Mature persistent leaves mostly less than 12mm long, with margins  
 curved outward (bell-shaped). . . . . **A. tridentata ssp. wyomingensis**



15a

15b. Mature persistent leaves mostly longer than 12mm with straight margins. . . . . **A. tridentata var. pauciflora**

14b. Heads with a maximum of 7 flowers or more.

16a. Heads with a maximum of 12 flowers or more. . . . . **A. tridentata ssp. spiciformis**

16b. Heads with a maximum of 11 flowers or less.

17a. Lobes of persistent leaves variable in size, shape, and number; many lobes with pointed tips. Plants mostly multi-stemmed. . . . . **A. tridentata ssp. spiciformis**

17b. Persistent leaves mostly with 3 rounded lobes; each usually similar in size and shape. Plants mostly single-stemmed or two-stemmed. . . . . **A. tridentata var. vaseyana**

**VEGETATIVE KEY**

18a. Mature persistent leaves mostly less than 12mm long, with margins curved outward (bell-shaped). . . . . **A. tridentata ssp. wyomingensis**

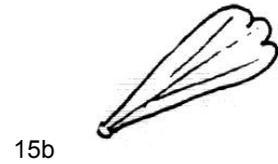
18b. Mature persistent leaves mostly longer than 12mm, with straight margins.

19a. Lobes of persistent leaves variable in size, shape, and number; many lobes with pointed tips. Plants mostly multi-stemmed and tend to resprout after fire. . . . . **A. tridentata ssp. spiciformis**

19b. Persistent leaves mostly with 3 rounded lobes, each usually similar in size and shape. Plants mostly single-stemmed or two-stemmed and do not resprout after fire.

20a. Persistent leaves widest at base of lobes. Inflorescence a spike or raceme with relatively few heads. Plants occasionally layering. . . . . **A. tridentata var. vaseyana**

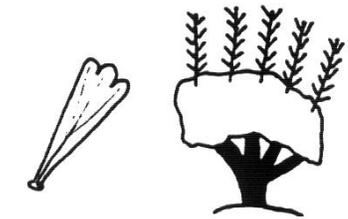
20b. Persistent leaves widest slightly below the base of the lobes. Inflorescence a panicle with numerous heads. Plants do not layer. . . . . **A. tridentata var. pauciflora**



15b



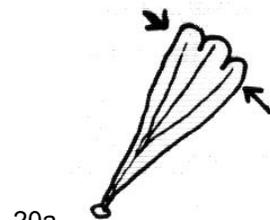
17a



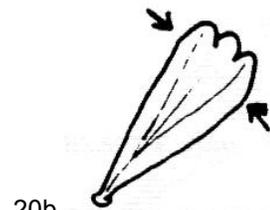
17b



19a



20a



20b