

LOWELL E. URBATSCH, ROLAND P. ROBERTS, AND VESNA KARAMAN. 2003. Phylogenetic evaluation of *Xylothamia*, *Gundlachia*, and related genera (Asteraceae, Astereae) based on ETS and ITS nrDNA sequence data. *American Journal of Botany* 90(4): 634-649.

Appendix. Taxa sampled in this study and their sources, voucher and Genbank data, and relevant literature citations for published sequences. DNA was extracted from fresh collected, frozen leaves for taxa marked with an asterisk. For unmarked taxa DNA was taken from leaves on the herbarium specimen.

TAXON	Source localities plus voucher data	ITS GenBank Locus Nos.	ETS GenBank Locus Nos.
<i>Amphiachyris dracunculoides</i> Nutt.	Texas: Hays Co. <i>Lane 1956</i> (LSU)	AF477626 clone 1 AF477627 clone 2	AF477690 clone 1 AF477691 clone 2
<i>Batopilasia byei</i> (S.D. Sundb. & G.L. Nesom) G.L. Nesom & Noyes	Mexico: Chihuahua. <i>Scott 471</i> (MO)	AF046974 <sup>2</sup>	AF477727
<i>Bigelovia nudata</i> DC.*	Louisiana: St. Tammany Parish. <i>Urbatsch 5148</i> (LSU)	AF477628 clone 1 AF477629 clone 2 AF477630 clone 3	AF477693 clone 1 AF477692 clone 2 AF477694 clone 3
<i>Bigelovia nuttallii</i> L.C. Anderson*	Louisiana: Natchitoches Parish. <i>Urbatsch 7580</i> (LSU)	AF477631	AF477695
<i>Boltonia asteroides</i> L'Her.	Louisiana: West Feliciana Parish. <i>Lievens 1845</i> (LSU)	AF477632	AF477696
<i>Boltonia diffusa</i> Elliot	Louisiana: Natchitoches Parish. <i>Riley s.n.</i> (LSU)	AF477633	AF477697
<i>Chaetopappa bellioides</i> (A. Gray) Shinnery	Texas: <i>Noyes 872</i> (MO)	AF046980 <sup>2</sup>	–
<i>Chaetopappa bellioides</i> (A. Gray) Shinnery	Texas: Medina Co. <i>Lievens 25</i> (LSU)	–	AY173394
<i>Chaetopappa ericoides</i> (Torrey) G.L. Nesom*	Arizona: Coconino Co. <i>Urbatsch &amp; Roberts 7661</i> (LSU)	AF477634	AF477698
<i>Chloracantha spinosa</i> (Benth.) G.L. Nesom*	Louisiana: Cameron Parish. <i>Ferguson 210</i> (LSU)	AF477635	AF477699
<i>Chrysoma pauciflosculosa</i> (Michx.) Greene *	Florida: Walton Co. <i>Urbatsch 7610</i> (LSU)	AF477636	AF477700
<i>Chrysoma pauciflosculosa</i> (Michx.) Greene *2	Florida: Gulf Co. <i>Urbatsch 7609</i> (LSU)	AF477637	AF477701
<i>Chrysothamnus depressus</i> Nutt.	Colorado: Mesa Co. <i>Urbatsch 1317</i> (LSU)	AF477638	AF477702

<i>Chrysothamnus viscidiflorus</i> Nutt.*	Utah: Washington Co. <i>Urbatsch 7631</i> (LSU)	AF477639	AF477703
<i>Croptilon divaricatum</i> (Nutt.) Raf.	Texas: <i>Nesom 7470</i> (UC)	AF251576 <sup>4</sup>	AF251634 <sup>4</sup>
<i>Doellingeria umbellata</i> Nees	Michigan: Chippewa Co. <i>Schmidt &amp; Merello 1060</i> (TEX)	AF477625	AF477754
<i>Ericameria cooperi</i> H.M. Hall	California: San Bernardino Co. <i>Helmkamp s.n.</i> (TEX)	AF477640	AF477704
<i>Ericameria cuneata</i> (A. Gray) McClatchie	California: Inyo Co. <i>Urbatsch &amp; Roberts 7957</i> (LSU)	AF477641	AF477705
<i>Ericameria ericoides</i> (Less.) Jepson	California: Monterrey Co. <i>Sunberg 2646</i> (TEX)	AF477642	AF477706
<i>Ericameria nauseosa</i> (Pallas ex Pursh) G.L. Nesom & G.I. Baird	Nevada: Lander Co. <i>Pinzl 10020</i> (TEX)	AF477643	AF477707
<i>Erigeron bellidiastrum</i> Nutt.	Texas: Roberts Co. <i>Karaman 8</i> (LSU)	AF477644	AF477708
<i>Erigeron procumbens</i> (Houstoun ex P. Miller) G.L. Nesom	Louisiana: Jefferson Parish. <i>Westphal 2121</i> (LSU)	AF477645 clone 1 AF477646 clone 2	AF477709 clone 1 AF477710 clone 2
<i>Erigeron subtrinervis</i> Rydb. ex Porter & Britton	Colorado: Archuleta Co. <i>Karaman 29</i> (LSU)	AF477647	AF477711
<i>Euthamia leptoccephala</i> (Torr. & A. Gray) Greene*	Louisiana: Acadia Parish. <i>Pellerin s.n.</i> (LSU)	AF477648	AF477712
<i>Euthamia leptoccephala</i> (Torr. & A. Gray) Greene*	Louisiana: West Feliciana Parish. <i>Urbatsch 7989</i> (LSU)	AF477649	AF477713
<i>Euthamia leptoccephala</i> (Torr. & Gray) Greene*	Mississippi: Wilkenson Co. <i>Urbatsch 7990</i> (LSU)	AF477650	AF477714
<i>Euthamia occidentalis</i> Nutt.*	Colorado: Mesa Co., <i>Urbatsch &amp; Roberts 7898</i> (LSU)	AF477651	AF477715
<i>Euthamia tenuifolia</i> (Pursh) Nutt.*	Florida: Wakulla Co. <i>Urbatsch 7585</i> (LSU)	AF477652	AF477716
<i>Euthamia tenuifolia</i> (Pursh) Nutt.*	Louisiana: St. Tammany Parish. <i>Ferguson 246</i> (LSU)	AF477653	AF477717
<i>Gundlachia corymbosa</i> (Urb.) Britton ex Bold.	West Indies: Caicos Islands. Pine Cay. <i>Correll 43104</i> (LL)	AF477654	AF477718
<i>Gundlachia corymbosa</i> (Urb.) Britton ex Bold.*	Puerto Rico: Quebradillas. <i>Axelrod 11957</i> (LSU)	AF477655 clone 1 AF477656 clone 2	AF477719 clone 1 AF477720 clone 2

<i>Gundlachia corymbosa</i> (Urb.) Britton ex Bold	Dominican Republic: de Montecristi. <i>Veloz 2609</i> (LSU)	AY173397 Clone 3 AY173398 Clone 4	AY173395 Clone 3 AY173396 Clone 4
<i>Gutierrezia sarothrae</i> (Pursh) Britton & Rusby*	Colorado: Mesa Co. <i>Urbatsch &amp; Roberts 7896</i> (LSU)	AF477657	AF477721
<i>Gutierrezia texana</i> (DC.) Torr. & Gray*	Texas: Eastland Co. <i>Urbatsch &amp; Roberts 7826</i> (LSU)	AF477658	AF477722
<i>Gymnosperma glutinosum</i> Less.	Texas: Frio Co. <i>Urbatsch 2772</i> (LSU)	AF477765	AF477723
<i>Haplopappus foliosus</i> DC.	CHILE: <i>Rundel, s.n.</i> UCBG 80.0298	AF251577 <sup>4</sup>	AF251635 <sup>4</sup>
<i>Haplopappus glutinosus</i> Cass.	CHILE: <i>Spare and Constance 17927</i> (UC)	AF251578 <sup>4</sup>	AF251636 <sup>4</sup>
<i>Haplopappus marginalis</i> Phil.	CHILE: <i>DeVore 1326</i> (UC)	AF251580 <sup>4</sup>	AF251638 <sup>4</sup>
<i>Haplopappus paucidentatus</i> Phil.	CHILE: <i>DeVore 1261</i> (UC)	AF251581 <sup>4</sup>	AF251639 <sup>4</sup>
<i>Hazardia detonsa</i> Greene	California: Santa Cruz Island. UCBG 95.0527	AF251582 <sup>4</sup>	AF251640 <sup>4</sup>
<i>Hazardia squarrosa</i> Greene	California: Los Angeles Co. <i>Ross 5908</i> (UC)	AF251583 <sup>4</sup>	AF251641 <sup>4</sup>
<i>Ionactis lineariifolia</i> (L.) Greene	Louisiana: Rapides Parish. <i>Bruser 357</i> (LSU)	AF477660	AF477724
<i>Isocoma acradenia</i> Greene	California: Riverside Co. <i>Thorne 55404</i> (UC)	AF251572 <sup>4</sup>	AF251630 <sup>4</sup>
<i>Isocoma menziesii</i> (Hook. & Arn.) G.L. Nesom	California: Los Angeles Co. <i>Bartholomew 535</i> UCBG 78.0157	AF251571 <sup>4</sup>	AF251629 <sup>4</sup>
<i>Lessingia glandulifera</i> A.Gray	California: San Luis Obispo Co. <i>Markos 169</i> (JEPS)	AF251602 <sup>4</sup>	AF251660 <sup>4</sup>
<i>Lessingia virgata</i> A.Gray	California: Tehama Co. <i>Markos 152</i> (JEPS)	AF251624 <sup>4</sup>	AF251682 <sup>4</sup>
<i>Machaeranthera parviflora</i> A.Gray	Texas: <i>Turner &amp; Powell 6094</i> (UC)	AF251568 <sup>4</sup>	AF251626 <sup>4</sup>
<i>Machaeranthera tanacetifolia</i> Nees	New Mexico: <i>Sanders 3065</i> (UC)	AF251567 <sup>4</sup>	AF251625 <sup>4</sup>
<i>Machaeranthera tanacetifolia</i> Nees	New Mexico: Colfax Co. <i>Karaman 18</i> (LSU)	AF477661	AF477725
<i>Oligoneuron nitidum</i> (Torr. & A. Gray) Small	Louisiana: Natchitoches Parish. <i>Urbatsch 7581</i> (LSU)	AF477662	AF477726
<i>Pyrrocoma apargioides</i> (A. Gray) Greene	California: Plumas Co. <i>Schoolcraft 2072</i> (UC)	AF251573 <sup>4</sup>	AF251631 <sup>4</sup>
<i>Pyrrocoma lanceolata</i> (Hook.) Greene	Utah: <i>Neese 17626</i> (UC)	AF251574 <sup>4</sup>	AF251632 <sup>4</sup>
<i>Sericocarpus tortifolius</i> Nees*	Florida: Wakulla Co. <i>Urbatsch 7599</i> (LSU)	AF477664	AF477728

<i>Solidago canadensis</i> L.	Louisiana: West Feliciana Parish. <i>Lievens 3347</i> (LSU)	AF477665	AF477729
<i>Solidago fistulosa</i> Mill.	Florida: Gulf Co. <i>Urbatsch 7587</i> (LSU)	AF477666 clone 1 AF477667 clone 2	AF477730 clone 1 AF477731 clone 2
<i>Solidago petiolaris</i> Aiton	Missouri: <i>Henderson 92-361</i> (MO)	AF046968 <sup>2</sup>	ITS only
<i>Solidago sempervirens</i> L.	Florida: Wakulla Co. <i>Urbatsch 7590</i> (LSU)	AF477668	AF477732
<i>Symphyotrichum subulatum</i> (Michx.) G.L. Nesom	Louisiana: Calcasieu Parish. <i>Neyland 1616</i> (LSU)	AF477670	AF477734
<i>Symphyotrichum tenuifolium</i> (L.) G.L. Nesom	Louisiana: Terrebonne Parish. <i>Buras 413</i> (LSU)	AF477669	AF477733
<i>Thurovia triflora</i> J.N. Rose	Texas: Maragorda Co. <i>Carr 17925</i> (TEX)	AF477671	AF477735
<i>Thurovia triflora</i> J.N. Rose	Texas: Brazoria Co. <i>Suh 21</i> (TEX)	AF477672	AF477736
<i>Tracyina rostrata</i> S.F. Blake	California: <i>Ornduff 6348</i> (US)	AF477673	AF477737
<i>Xanthisma texanum</i> DC.	Texas: <i>Lane 3234</i> (UC)	AF251575 <sup>4</sup>	AF251633 <sup>4</sup>
<i>Xanthocephalum gymnospermoides</i> (A. Gray) Benth. & Hook. f.	Texas: Jeff Davis Co. <i>Morgan 2200</i> (TEX)	U97650 <sup>3</sup>	D. Morgan, unpublished
<i>Xylorhiza tortifolia</i> (Torr. & A. Gray) Greene	California: Inyo Co. <i>Wisura 4770</i> (UC)	AF251570 <sup>4</sup>	AF251628 <sup>4</sup>
<i>Xylothamia diffusa</i> (Benth.) G.L. Nesom	Mexico: Sonora. <i>Frisbein 1983a</i> (TEX)	AF477674 clone 1 AF477675 clone 2	AF477738 clone 1 AF477739 clone 2
<i>Xylothamia diffusa</i> (Benth.) G.L. Nesom	Mexico: Sonora. Van Devender 93-1273 (TEX)	AF477676	AF477740
<i>Xylothamia johnstonii</i> G.L. Nesom	Mexico: Hidalgo. <i>Vilchis 379</i> (TEX)	AF477677	AF477741
<i>Xylothamia palmeri</i> (A.Gray) G.L. Nesom	Texas: Jim Wells Co. <i>Atha 376</i> (TEX)	AF477678	AF477742
<i>Xylothamia palmeri</i> (A.Gray) G.L. Nesom	Texas: McMullen Co. <i>Carr 10906</i> (TEX)	AF477679	AF477743
<i>Xylothamia parrasana</i> (S.F.Blake) G.L. Nesom	Mexico: Zacatecas. <i>Johnston 11542</i> (TEX)	AF477680 clone 1 AF477681 clone 2	AF477744 clone 1 AF477745 clone 2
<i>Xylothamia pseudobaccharis</i> (S.F.Blake) G.L. Nesom	Mexico: Coahuila. <i>Nesom 7688</i> (TEX)	AF477682 clone 1 AF477683 clone 2	AF477746 clone 1 AF477747 clone 2

<i>Xylothamia purpusii</i> (Brandege) G.L. Nesom	Mexico: Durango. <i>Chiang et al.</i> 9984 (LL)	AF477684 clone 1 AF477685 clone 2	AF477748 clone 1 AF477749 clone 2
<i>Xylothamia riskindii</i> (B. Turner & G. Langford) G.L. Nesom	Mexico: Nuevo Leon. <i>Nesom</i> 7697 (TEX)	AF477686	AF477750
<i>Xylothamia triantha</i> (S.F. Blake) G.L. Nesom	Texas: Brewster Co. <i>Powell</i> 3542 (TEX)	AF477687	AF477751
<i>Xylothamia truncata</i> G.L. Nesom	Mexico: Coahuila. <i>Nesom</i> 5254 (TEX)	AF477688 clone 1 AF477689 clone 2	AF477752 clone 1 AF477753 clone 2

<sup>1</sup>Noyes, 2000; <sup>2</sup>Noyes and Rieseberg, 1999; <sup>3</sup>Morgan, 1997; <sup>4</sup>Markos and Baldwin, 2001.