

Table S1. Sampling plots of *A. philoxeroides*-invaded communities in terrestrial and aquatic habitats.

Terrestrial plot	Geographic location	Invasion coverage/%	Site type	Aquatic plot	Geographic location	Invasion coverage/%	Site type
1	21°54'17"N, 110°52'32"E	69	Roadside	1	21°54'41"N, 110°51'52"E	62	Water channel
2	21°54'42"N, 110°51'52"E	54	Garden	2	21°54'58"N, 110°53'45"E	66	Pond
3	21°55'10"N, 110°53'07"E	49	Farmland	3	21°50'31"N, 111°57'47"E	50	Water channel
4	21°50'44"N, 111°57'22"E	57	Garden	4	21°50'04"N, 111°56'12"E	52	Puddle
5	21°50'04"N, 111°57'25"E	56	Abandoned land	5	21°59'48"N, 111°56'19"E	49	Puddle
6	23°24'17"N, 111°29'59"E	44	Roadside	6	23°23'56"N, 111°30'53"E	79	Pond
7	23°24'12"N, 111°29'59"E	35	Garden	7	23°38'54"N, 114°42'00"E	61	Water channel
8	23°24'26"N, 111°29'32"E	48	Riparian zone	8	23°39'23"N, 114°41'45"E	71	Pond
9	23°43'26"N, 114°42'45"E	36	Garden	9	23°39'28"N, 114°41'39"E	32	Puddle
10	23°43'22"N, 114°43'09"E	43	Garden	10	23°42'32"N, 114°42'10"E	66	Water channel
11	25°38'21"N, 110°40'38"E	63	Garden	11	25°38'27"N, 110°40'34"E	89	Puddle
12	25°33'44"N, 110°40'03"E	64	Roadside	12	25°37'58"N, 110°40'10"E	69	Paddy
13	25°38'06"N, 114°46'11"E	75	Roadside	13	25°37'57"N, 110°40'09"E	61	Pond
14	25°38'10"N, 114°44'27"E	52	Farmland	14	25°38'39"N, 114°44'37"E	46	Paddy
15	25°38'33"N, 114°44'33"E	62	Roadside	15	25°38'32"N, 114°44'33"E	38	Puddle
16	27°58'41"N, 113°02'08"E	75	Roadside	16	27°48'05"N, 112°59'28"E	87	Pond
17	27°57'53"N, 113°00'56"E	71	Roadside	17	27°48'07"N, 112°59'27"E	53	Pond
18	27°26'38"N, 115°19'19"E	47	Roadside	18	27°48'39"N, 112°57'58"E	73	Pond
19	27°38'16"N, 115°19'44"E	67	Abandoned land	19	27°36'56"N, 115°19'09"E	89	River

20	27°36'58"N, 115°19'08"E	46	Garden	20	27°36'56"N, 115°19'10"E	79	River
21	29°59'27"N, 113°56'42"E	67	Riparian zone	21	30°43'08"N, 114°04'20"E	90	Puddle
22	30°00'14"N, 113°58'16"E	73	Roadside	22	30°00'13"N, 113°58'17"E	85	Puddle
23	29°56'28"N, 113°58'23"E	71	Abandoned land	23	29°19'47"N, 115°45'54"E	79	Puddle
24	29°20'44"N, 115°47'06"E	48	Roadside	24	29°19'43"N, 115°45'53"E	92	Pond
25	29°19'44"N, 115°45'54"E	64	Farmland	25	29°15'50"N, 115°42'28"E	82	Pond
26	32°04'44"N, 114°06'94"E	64	Riparian zone	26	32°07'86"N, 114°01'84"E	85	Puddle
27	32°02'79"N, 114°08'78"E	54	Garden	27	32°03'69"N, 114°07'76"E	91	Pond
28	32°34'83"N, 117°08'50"E	69	Abandoned land	28	32°03'14"N, 114°08'50"E	62	Paddy
29	32°35'09"N, 117°09'50"E	55	Farmland	29	32°35'57"N, 117°08'06"E	91	Pond
30	32°33'54"N, 117°08'64"E	48	Farmland	30	32°35'02"N, 117°08'08"E	67	Water channel
31	33°55'63"N, 113°55'31"E	58	Roadside	31	33°50'21"N, 114°01'99"E	89	River
32	34°07'82"N, 113°45'56"E	48	Farmland	32	33°49'86"N, 114°01'37"E	91	River
33	34°08'86"N, 113°42'78"E	23	Roadside	33	34°22'21"N, 117°16'09"E	77	Water channel
34	34°20'36"N, 117°16'10"E	61	Farmland	34	34°21'76"N, 117°16'03"E	92	Pond
35	34°22'08"N, 117°16'01"E	70	Abandoned land	35	34°22'21"N, 117°15'51"E	79	River
36	36°22'23"N, 114°24'66"E	59	Riparian zone	36	36°22'96"N, 114°24'90"E	54	River
37	36°25'32"N, 114°25'05"E	82	Riparian zone	37	36°22'13"N, 114°24'14"E	95	River
38	36°13'31"N, 116°46'91"E	66	Roadside	38	36°22'39"N, 114°20'26"E	57	River
39	36°13'01"N, 116°45'76"E	37	Abandoned land	39	36°12'49"N, 116°44'54"E	82	River
40	36°13'09"N, 116°45'25"E	57	Abandoned land	40	36°13'06"N, 116°45'26"E	78	River

Table S2. The functional traits of species with high-frequency in terrestrial and aquatic *A. philoxeroides*-invaded communities.

Code	Plant species	Frequency	Persistence	Propagation forms	Code	Plant science	Frequency	Persistence	Propagation forms
Terrestrial community					Aquatic community				
1	<i>Alternanthera philoxeroides</i>	40	Perennial	Vegetative	1	<i>Alternanthera philoxeroides</i>	40	Perennial	Vegetative
2	<i>Digitaria sanguinalis</i>	30	Annual	Generative	2	<i>Paspalum paspaloides</i>	25	Perennial	Vegetative/Generative
3	<i>Echinochloa crusgalli</i>	28	Annual	Generative	3	<i>Polygonum hydropiper</i>	20	Annual	Generative
4	<i>Bidens pilosa</i>	25	Annual	Generative	4	<i>Echinochloa crusgalli</i>	18	Annual	Generative
5	<i>Ipomoea nil</i>	23	Annual	Generative	5	<i>Bidens pilosa</i>	14	Annual	Generative
6	<i>Eleusine indica</i>	22	Annual	Vegetative/Generative	6	<i>Commelina communis</i>	9	Annual	Vegetative/Generative
7	<i>Cyperus rotundus</i>	21	Perennial	Vegetative/Generative	7	<i>Cyperus rotundus</i>	8	Perennial	Vegetative
8	<i>Setaria viridis</i>	19	Annual	Generative	8	<i>Kyllinga brevifolia</i>	7	Perennial	Vegetative
9	<i>Commelina communis</i>	18	Annual	Vegetative/Generative	9	<i>Eclipta prostrata</i>	7	Annual	Generative
10	<i>Cyperus rotundus</i>	16	Perennial	Vegetative	10	<i>Humulus scandens</i>	7	Perennial	Vegetative/Generative
11	<i>Acalypha australis</i>	16	Annual	Vegetative	11	<i>Ipomoea nil</i>	7	Annual	Generative
12	<i>Humulus scandens</i>	15	Perennial	Vegetative/Generative	12	<i>Lemna minor</i>	6	Annual	Vegetative
13	<i>Ageratum conyzoides</i>	15	Annual	Vegetative/Generative	13	<i>Digitaria sanguinalis</i>	6	Annual	Generative
14	<i>Erigeron canadensis</i>	15	Annual	Generative	14	<i>Acorus calamus</i>	5	Perennial	Vegetative/Generative
15	<i>Artemisia argyi</i>	15	Perennial	Vegetative	15	<i>Glycine soja</i>	5	Annual	Generative
16	<i>Eclipta prostrata</i>	15	Annual	Generative	16	<i>Alternanthera sessilis</i>	5	Perennial	Vegetative/Generative
17	<i>Cynodon dactylon</i>	14	Perennial	Vegetative	17	<i>Eleusine indica</i>	5	Annual	Vegetative/Generative
18	<i>Polygonum hydropiper</i>	14	Annual	Generative	18	<i>Trigastrotheca stricta</i>	5	Annual	Vegetative
19	<i>Amaranthus blitum</i>	13	Annual	Generative	19	<i>Cyperus rotundus</i>	5	Perennial	Vegetative/Generative

20	<i>Erigeron annuus</i>	12	Annual	Generative	20	<i>Polygonum perfoliatum</i>	4	Annual	Generative
21	<i>Oxalis corniculata</i>	10	Perennial	Vegetative/Generative	21	<i>Phragmites australis</i>	4	Perennial	Vegetative
22	<i>Paspalum paspaloides</i>	9	Perennial	Vegetative/Generative	22	<i>Senna tora</i>	4	Annual	Generative
23	<i>Broussonetia papyrifera</i>	9	Perennial	Vegetative/Generative	23	<i>Symphytotrichum subulatum</i>	4	Annual	Generative
24	<i>Ludwigia prostrata</i>	9	Annual	Generative	24	<i>Microstegium nodosum</i>	4	Annual	Generative
25	<i>Portulaca oleracea</i>	9	Annual	Vegetative/Generative					